

2.0 PLAN ALTERNATIVES

There are two alternatives presented in this plan: Alternative A, the Preferred Alternative/Proposed Action, and Alternative B, No Action/Current Management. In formulating the proposed plan, a variety of management options were considered that met the purpose and need in different ways. However, many of these options were duplicative with less environmentally damaging or less expensive alternatives, were not raised as important issues during scoping, and/or were not within the authority of this planning action (e.g., would require changing current regulations). Based on these considerations, these options were not developed in an official alternative, and two alternatives were ultimately considered.

Section 2.1 Alternative A includes a detailed description of the issues and items that comprise the plan elements. Some issues and items are required by law and policy leading to actions that must be done a certain way. These are consistent between the two alternatives and will be discussed only in Alternative A.

Other issues and items do not have required actions and may be addressed in a variety of ways. These issues and items form the difference between the two alternatives. Section 2.2 Alternative B focuses on those issues and items where actions are different between the two alternatives. Table 2-1, at the end of this chapter, provides a comparison of standards between the two alternatives.

Throughout the discussion of the two alternatives, the terms “Minimum Concept Requirement” and “Minimum Concept Analysis” are used. The reader is referred to Section 2.1.4.1 for an explanation of these terms.

2.1 Alternative A, Preferred Alternative (Proposed Action)

2.1.1 Management Classes/Desired Future Conditions

All backcountry/wilderness areas of Rocky Mountain National Park (RMNP or the Park) are designated in one of four Management Classes. Each Management Class is described in terms of the desired social, resource and managerial conditions for that area. While social and resource indicators generally remain the same across Management Classes, standards in each may be different. These descriptions provide guidance for management decisions related to backcountry/wilderness resources and use. All actions and activities, which may be different among Management Classes, will follow wilderness laws and policies.

Management Classes are designated based upon the following criteria:

1. Type and amount of use;
2. Accessibility and challenge;
3. Opportunity for solitude;
4. Acceptable resource conditions;
5. Management use.

2.1.1.1 Management Class 1

Management Class 1, approximately 170,236 acres, generally includes Research Natural Areas, tundra areas, and other areas not in Management Classes 2, 3 or 4. (See Figure 2-1).

Use:

- Day use only
- No overnight camping (except approved management activities and winter area camping with restrictions)
- Group size of seven (7) or less desirable
- Low day use
- No stock use

Access and challenge:

- Generally moderate to difficult
- Challenge/risk/freedom and self reliance are primary goals of the visitor

Opportunity for solitude:

- Outstanding opportunity for solitude
- Chance of seeing other visitors/park staff is low
- Natural sounds prevail

Acceptable resource conditions:

- Natural environment with little evidence of recent impacts by humans
- Evidence of management is extremely rare
- Resource impacts are non-discernable

Management use:

- No designated or maintained trails
- Routes are generally non-discernable
- No signs, cairns
- No facilities
- No aircraft or motorized equipment (except during emergency operations or absolutely critical for the protection of natural or cultural resources as determined on a case-by-case basis through a Minimum Requirement Analysis and approved by the Superintendent)

2.1.1.2 Management Class 2

Management Class 2, approximately 36,832 acres, generally includes crosscountry routes, crosscountry camping areas, and bivouac areas. (See Figure 2-1).

Use:

- Area camping allowed, seven (7) or fewer people; no fires
- No designated camp areas (except Little Rock Lake)
- Low to moderate use
- No stock use

Access and challenge:

- Moderate to difficult
- Challenge/risk/freedom and self reliance are primary goals of visitors

Opportunity for solitude:

- Opportunity for solitude high most of the year, moderate during summer months

- Chance of seeing other visitors/park staff is low to moderate
- Some noise interferes with natural sounds

Acceptable resource conditions:

- Resource impacts are restricted to minor losses of vegetation where camping occurs and along use routes
- Predominately unmodified natural environment

Management use:

- No designated trails, but some designated routes
- No formal maintained treadway (erosion and drainage control techniques allowed)
- Minimum cairns as necessary to provide for resource protection and visitor safety
- No facilities (cabins, hitchrails, privies)
- No motorized equipment (except when approved via Minimum Requirement Analysis)
- Only those signs necessary to protect resources and public safety

2.1.1.3 Management Class 3

Management Class 3, approximately 27,474 acres, generally includes formal trail corridors (100 feet on either side of trail) and designated campsite areas (100 feet from edge of campsite). (See Figure 2-1).

Use:

- Moderate - high
- Day group size of no larger than 20 recommended
- Designated campsites - group size 1-7 or 8-12
- Campfires in specific campsites only
- Stock use allowed on stock designated trails and camp sites only

Access and challenge:

- Low to high
- Broad spectrum of expected challenge level

Opportunity for solitude:

- Broad spectrum, low to high, depending on time of year, day of week, time of day, weather etc.

Acceptable resource conditions:

- Resource impacts are limited to the immediate trail corridor (100 feet either side of center line of trail) and campsites (100 foot radius from metal arrowhead)

Management use:

- Facilities: privies, hitchrails, corrals, cabins, tent pads, food protection devices, signs, research equipment etc. as per the Minimum Requirement Concept
- Use of aircraft/motorized equipment/blasting, requires Minimum Requirement Analysis (programmatically in an approved management plan or on an individual basis)
- Use of stock for facility/trail maintenance
- Designated, formally constructed and maintained trails (Standards D, E and F – see Section 2.1.4.7.2)

2.1.1.4 Management Class 4

Management Class 4, approximately 23,313 acres, generally includes formal trail corridors (200 feet on either side of trail), specific day use areas (200 feet from edge of area) and backcountry areas not recommended as Wilderness. (See Figure 2-1).

Use:

- High
- No group size recommendation; however, large groups encouraged to split up
- Day use only, no camping (except Moore Park, Rabbit Ears, Peregrine, Cub Lake, Arch Rocks, Mill Creek Basin and Upper Mill Creek designated camp areas)
- Stock use allowed on stock designated trails only

Access and challenge:

- High access
- Low to moderate challenge

Opportunity for solitude:

- Broad spectrum, low to moderate, depending on time of year, day of week, time of day, weather, etc.
- Chance of seeing other visitors and staff high during summer months

Acceptable resource conditions:

- Resource impacts are limited to the immediate trail corridor (200 feet either side of center line of trail) and day use areas (200 foot radius from attraction)

Management use:

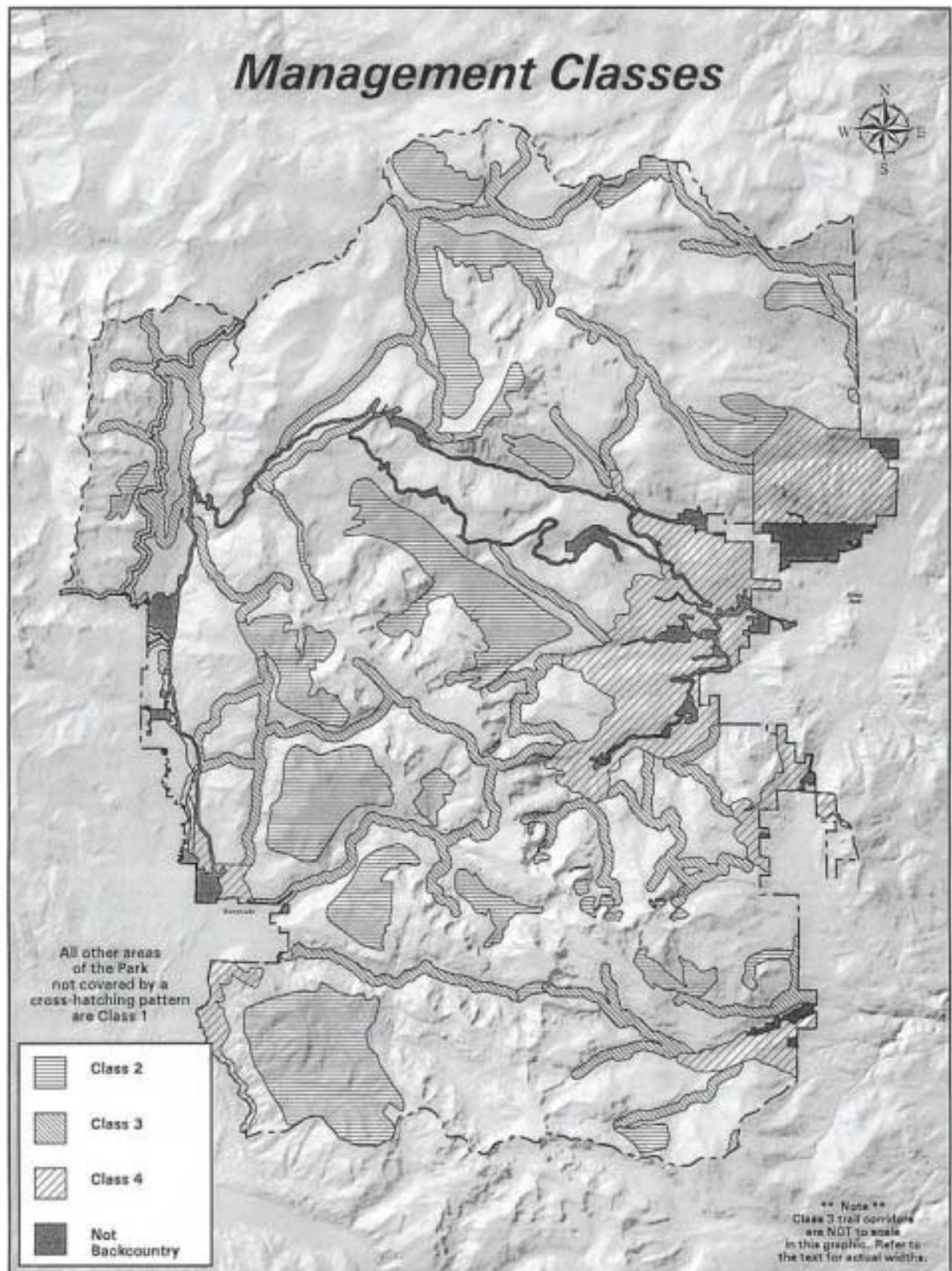
- Facilities: privies, hitchrails, signs, hardened areas at attractions etc. as per the Minimum Requirement Concept
- Use of aircraft/motorized equipment/blasting, requires Minimum Requirement Analysis (programmatically in an approved management plan or on an individual basis)
- Use of stock for facility/trail maintenance
- Designated, formally constructed and maintained trails (Standards B through F – see Section 2.1.4.7.2)

2.1.2 Resource Conditions

2.1.2.1 Vegetation/Soils

Vegetation and soils should prevail in their natural condition. However, visitor use and management activities can affect vegetation and soils. Perhaps the most visible impacts in the wilderness are large bare ground areas and social or braided trails, resulting from vegetation loss and soil erosion due to visitor use. Trampling (primarily by visitor and stock travel and camping), tree mutilations, alteration of vegetative composition (including introduction and spread of exotics), impacts on special category plants (e.g., rare or threatened species), and use of native materials for wilderness facilities can all cause unacceptable changes to resource conditions.

2.1.2.1.1 Bare Ground/Social and Braided Trails. Day use areas (e.g., lakes, waterfalls, scenic vistas) are a major concern for impacts to vegetation and soil. Bare ground may develop as a result of repeated day use activities (e.g., fishing, viewing scenery or picnicking). Bare

**Figure 2-1**

ground sites are created and exist in day use areas more than are necessary or acceptable. A determination will be made of the appropriate number and location of bare ground day use sites based on resource and visitor experience considerations. These sites will be officially "designated" to be retained for visitor use. A monitoring system will be developed to accurately track vegetation damage and soil erosion at these locations.

Only naturally occurring bare ground areas will be allowed in Management Class 1. At day use destination sites bare ground areas will not exceed 50-sq. ft. in Management Class 2; 100-sq. ft. in Management Class 3; and 150-sq. ft. in the Management Class 4.

New bare ground sites will only be allowed when relocation of existing sites is necessary, or development of new sites will better protect resources or the visitors' wilderness experience. Project Proposal/Clearance review, including Minimum Requirement Analysis, is required for the development or improvement of new day use sites.

Visitors and stock create social trails and braided trails when they leave the main trail for a number of reasons. These impacts occur mainly at or near destination day use areas, around backcountry campsites or along trails that pass through meadows. Once established, vegetation loss and erosion are accelerated. Social trails are undesirable and will be blocked off and rehabilitated whenever possible in all Management Classes. The Park may provide appropriate and durable access trails to points of interest at popular destinations.

Trail braiding develops mostly during the spring when trails may still be snow covered, wet and muddy, or blocked by fallen trees. Early season and proper trail maintenance (e.g., cleaning out drainage, clearing logs) will be performed to provide adequate and durable trail tread in order to minimize conditions that tempt visitors off the trail. Information will be made available to visitors on how to avoid causing impacts from traveling off trail or in fragile areas. All areas where trail braiding occurs will be rehabilitated, and problems causing visitors to leave the trail will be addressed.

2.1.2.1.2 Plants and Trees. There currently are no federal or state listed T&E plant species within the Park. There are 27 plant species that are recognized by the Colorado Natural Heritage Program (CNHP) as being vulnerable to extremely rare. The status of these plant species, along with their location in the Park, will be monitored.

Impacts to trees are sometimes caused at camp areas and destination day use areas due to the carving and hacking of trunks, knocking down of dead, standing trees, breaking or cutting dead limbs off live trees, compaction of soils and soil erosion surrounding roots. Management actions including increased enforcement and site rehabilitation will occur in any area with these impacts.

The RMNP 1996 Standards and Guidelines for Hazard Tree Detection and Correction and NPS-77 Natural Resources Management Guidelines will be followed for hazard tree survey/assessment and abatement in the backcountry/wilderness. The Minimum Requirement Concept will be followed. In cases where an extreme hazard tree is located in or near a camp area, day use area or backcountry facility, management actions may include removal of the hazard tree, site closure or facility relocation. Project Proposal/Clearance review is required for site closure or facility relocation. Hazard trees that are removed will have stumps flush cut and camouflaged.

2.1.2.1.3 Use of Native Materials. In keeping with wilderness character, natural materials (e.g., logs, rock, gravel, soil) are preferred to repair or construct wilderness facilities (e.g., water

bars, sign posts, tent pads, bridges) or restore desired conditions to impacted areas, though they must be selected and obtained carefully. The use of local native materials may cause impacts in and of themselves. Immediate and short-term impacts, as well as cumulative impacts from removal of materials from within the Park, must be evaluated. Wilderness resource preservation and protection of wilderness values must be of primary concern. The least number and type of facilities and structures necessary to meet wilderness objectives will be permitted. This will ensure that Wilderness Act objectives are met and use of native materials is kept to a minimum.

Sources of materials may include: areas immediately adjacent to the project site; areas from within wilderness but not from the project area; collection from park developed areas or road corridors; and purchase from commercial businesses or other agencies. Decisions to obtain natural materials from any of these sources must consider the relative impacts on the natural environment and sustainability, with priority given to protecting the wilderness resource and values. When native materials are used from within the wilderness, the source location is to be returned to its natural appearance. Materials to be used in any project will be discussed as part of the project review process.

When logs are needed for a project, sections from dead and down trees should generally be used. The use of live trees or standing snags for may only occur when no practicable alternatives exist and upon full compliance with Endangered Species Act guidelines. Live trees should not be cut within 1/2 mile of treeline.

The removal of soil, sand, gravel and rocks from the wilderness can result in adverse impacts. When determining the source of materials, consideration must be given to potential impacts on vegetation (especially special category plants) and wildlife (due to removal of materials), impacts on the visitor experience (from the method required to transport the materials), and potential introduction of exotic seeds in imported fill. Removing native materials from lakes, ponds and streams or their shorelines could impact fish, aquatic insects, and amphibians by disturbing hiding, resting, feeding, or spawning areas and may be a violation of the Clean Water Act. Removal of sand, gravel, and rocks from these sources should not occur.

The amount of material needed will be determined by each individual project. Small amounts of soil, gravel and rocks may be obtained from sites adjacent to the project area. Potential sources of soil, gravel and rocks include trail drainage areas, root wads, talus slopes, slides and borrow pits. However, repeated removal from the same source sites should be avoided. When large amounts of material is needed they should be obtained from outside sources. Refer to Section 2.1.4.7.3, Fill Material and Borrow Pits.

2.1.2.1.4 Exotic Plants. Exotic plants/noxious weeds are one of the greatest threats to the integrity and biological diversity of the backcountry/wilderness resources of the Park. Currently, there are over 100 invasive exotic plant species known to exist in the Park, of which the Park is actively managing 28 species as identified in the Exotic Plant Management Plan. Fortunately, many have not made their way into the backcountry/wilderness. Noxious weeds invade and spread by a variety of means. Once established, they often rapidly increase their range, transported by wind, water, animals, or people. They are most commonly found along the trail corridor and other locations of visitor and stock travel.

Noxious weeds are aggressive and competitive. They displace native plants by stealing moisture, nutrients, and sunlight from the surrounding plants. Some can inhibit the growth of native plants around them. In addition, noxious weeds destroy habitat for flora and fauna and

can cause increased soil erosion, which leads to long-term changes in plant communities. The goal is to eliminate all noxious weeds within the wilderness. This may be impractical or impossible; however, containment and/or reduction may be possible. The Park's highest priority for prevention of invasion and control of target exotics is in the backcountry/wilderness.

Wilderness is partly defined by the 1964 Wilderness Act to mean "...an area of undeveloped Federal land retaining its primeval character... which is protected and managed so as to preserve its natural conditions...". If invasive noxious weeds are not controlled, there will be an irretrievable and irreversible loss of natural conditions. The Park will control and manage noxious weeds in order to preserve the natural conditions of the wilderness resource.

An Exotic Plant Management Plan is currently being developed. Proposed actions include preventing invasion of noxious weeds, increasing public awareness, inventorying and monitoring locations, conducting research, integrating planning and evaluation, working closely with adjacent landowners and local communities, and managing invasive noxious weeds by a variety of treatments. Appropriate treatments will be identified within the Exotic Plant Management Plan.

RM-41 Wilderness Preservation and Management states that wilderness resources or character cannot be compromised unless the actions have only localized short-term adverse impacts. Certain treatments may impact wilderness values in the short-term, but will benefit wilderness values in the long-term. The Minimum Requirement Concept will be followed when deciding which treatment to use and how it is applied in wilderness.

Ground-disturbing activities provide suitable substrate for many invasive exotic plants. Any management action with new ground-disturbing activities (e.g., installation of research equipment, trail work, new privy holes, revegetation) will include an evaluation of the potential for introduction of exotic plants and what mitigation actions will take place to prevent any introduction.

2.1.2.2 Fish and Wildlife

Rocky Mountain National Park is known worldwide for its fish and wildlife species. A main reason many visitors come to the Park is to view and enjoy these valuable resources. The Park will maintain the natural abundance, diversity, and integrity of indigenous fish and wildlife. Genetically diverse populations of native species will be maintained, with special emphasis on the protection of federally listed threatened and endangered species (Appendix A) and their habitats. Threatened and endangered species management will be closely coordinated with the USFWS. Management and use restrictions may occur to protect threatened and endangered species, as well as to prevent rare species from becoming listed.

Native species that have been extirpated will be restored if deemed feasible. Any non-native species, which threaten park resources or public health, may be controlled or removed when prudent and feasible. Specific management of fish and wildlife species (e.g., elk, bear, greenback cutthroat trout, problem/nuisance animals) is detailed in the Park's Resource Management Plan. All wildlife management actions will be conducted in full compliance with the Minimum Requirement Concept, Section 2.1.4.1.

The fishery resource will be managed to preserve native populations of cutthroat trout and provide quality angling opportunities for wild trout. Fishing was a traditional and popular activity in the area even before the Park's establishment. The only native sport fish in the Park are the

Greenback cutthroat (a federally listed Threatened species) and Colorado River cutthroat trout. Some suckers also inhabit streams and lakes. In an attempt to improve the sport, early settlers, and even the NPS as recent as 1968, stocked many streams with non-native species of trout (e.g., Brown, Rainbow, Brook) and moved trout to lakes and streams that lacked them. This is no longer acceptable or allowed. In order to restore the fishery resource to original conditions, artificial stocking is only done to supplement or restore native cutthroat species to waters previously altered. Native fish restoration projects (e.g., Greenback and Colorado River cutthroat) will be conducted as outlined in the Resource Management Plan.

Wildlife is to be protected as much as possible from human disturbance with incidents of feeding, touching, teasing, hazing, frightening or otherwise disturbing wildlife minimized. Human disturbance should not displace wildlife from crucial areas (e.g., wintering and calving areas). Temporary or permanent closures of, or visitor use limits in specific areas (e.g., trails, campsites, meadows, rock faces, climbing routes) may be established to protect wildlife species during critical periods of time or critical habitat.

Certain risks are inherent when visiting the habitat of wild animals. Visitors must be aware of potential safety and property damage hazards when travelling and camping in wilderness. Information on how visitors can prevent unacceptable interactions between wildlife and humans will be made available. Proper food storage and garbage handling procedures, by visitors and employees, will be emphasized and enforced. Where problems currently exist, or a potential for such problems is high, additional education will be provided and food protection devices will be considered. If food protection devices are determined to be necessary, visitors will be required to use such facilities at night and whenever food/scented items are not in active use. Once determined to no longer be necessary, the device should be removed. Garbage containers will not be placed in the backcountry/ wilderness. Burying of garbage is not allowed. All garbage must be packed out and disposed of properly in wildlife proof containers.

When wildlife becomes an unacceptable nuisance or direct hazard to humans, management actions, such as area closure or animal trapping, translocation, or destruction may be required for human safety. Where hazardous animals pose a risk to human safety, an evaluation will be done on a case-by-case basis to determine the best actions to ensure the protection of both humans and wildlife.

2.1.2.3 Air Quality

Air quality in the Park may be some of the most pristine in the state; however, airborne pollutants are known to be affecting the wilderness' air quality. Rocky Mountain National Park is designated a Class I area under the Clean Air Act and is thus given the highest level of air quality protection. Air quality within the wilderness will be maintained or restored to the highest quality possible and protected so that minimal or no degradation occurs.

The majority of air quality-related effects on the wilderness originate from outside the Park. Acid precipitation, harmful biologic effects, and adverse impacts on ambient air quality including visibility may all result from activities outside park boundaries. Management Policies outline that "the Park Service will assume an aggressive role in promoting and pursuing measures to safeguard air quality related values from the adverse impacts of air pollution". The Park Service will participate in the development of federal, state, and local air pollution control plans and regulations, will review permit applications for major new air pollution sources and will make recommendations on permit approval or modification to ensure RMNP wilderness air quality values meet Class I standards. The Park will also work with potential and known air pollution

sources to meet the National Visibility Goal of the Clean Air Act: to remedy impaired visibility and prevent any future impairment of visibility from human-caused air pollution.

Temporary degradation of visibility and increased particulate matter from wildland fires and management prescribed fires may occur. Fire management personnel will work to minimize the effects and stay within federal and state air quality standards.

The goal for air quality monitoring in Rocky Mountain National Park will be to monitor weather, air quality, acid precipitation, and biological effects within the backcountry/wilderness to determine if unacceptable impacts to air quality related values are occurring.

2.1.2.4 Aquatic Resources

There are approximately 147 lakes, 473 miles (757 kilometers) of rivers and streams, and an unknown number of springs in the Park. The majority of influences on park waters are from management activities, visitor use, or atmospheric influences. Threats such as alterations due to cloud seeding, air pollutants, and from human use; sedimentation from shoreline erosion and contamination with human wastes; and past management activities such as those associated with the Grand and Specimen Ditches and livery stables are recognized and are currently being investigated. Several water diversion/delivery systems (e.g., Eureka Ditch) and water storage dams (e.g., Bluebird, Pear, Sandbeach, Lawn Lake) have been removed and the areas are being restored to natural conditions.

All lakes and streams are naturally occurring with the exception of Sprague, Lily, and Copeland Lakes and the Colorado River that is impacted by diversions from the Grand Ditch. Tonahutu Creek is affected by diversions from Harbison Ditch and the Grand Lake Lodge. Aquatic ecosystems will be managed to maintain and restore natural processes and native species indigenous to the Park.

2.1.2.4.1 Water Quality. Obvious signs of pollution from humans and stock are litter, food particles, cleansing agents, and other wastes; high levels of chemical and biological indicators of cultural eutrophication of lakes, streams, and wetlands; presence of social trails adjacent to lakes, streams, or wetlands; adverse effects on habitat and populations of aquatic organisms (fish, amphibians, macroinvertebrates, aquatic vegetation, plankton).

No measurable degradation of water quality (as determined through aquatic resource monitoring programs) should result from human activity, including park administrative use and management of the backcountry/wilderness. Coliform counts for adjacent lakes and streams will not exceed the legal limit as defined by the Colorado Department of Health.

Designated camp areas/sites should not be located less than 200 feet (70 adult steps) from surface waters. Camping in crosscountry, bivouac and winter areas should not be located less than 200 feet (70 adult steps) from surface waters. Visitors will be advised to treat all drinking water. Where adjacent surface waters are suspected of being seriously degraded by recreational use, as suggested by documented chemical, biological or physical characteristics, designated camp areas/sites may be closed or use limited until problems can be mitigated.

Privies will not be placed less than 200 feet (70 adult steps) from surface waters and all privies will meet applicable standards. Privies not meeting sanitation standards will be removed, relocated and/or replaced with an alternative waste management system, if feasible. Current privies that are infiltrated with ground water will be removed and relocated. No washing or use

of cleansing agents, disposal of dishwater or food, human or animal wastes is permitted within 200 feet (70 adult steps) of surface waters. Trails will be not located in areas where they may cause sedimentation into adjacent surface waters, or threaten critical habitat of aquatic organisms. Trails that threaten aquatic resources will be closed and damage mitigated.

Periodic inspections of management facilities such as underground fuel tanks and sewage treatment facilities will be conducted to prevent contamination to downstream wilderness areas. Inventories of aquatic organisms will be conducted and habitat maps developed to aid in monitoring the effects of human use on aquatic fauna. Public education, interpretive media and enforcement of regulations will be utilized to protect aquatic resources. Introduced fish species will be eradicated using methods that are least disruptive to aquatic ecosystems and values.

2.1.2.4.2 Monitoring. Aquatic conditions are monitored and evaluated on a rotating basis at two permanent National Water Quality Assessment Stations (NAWQUA) administered by the U.S. Geological Survey. One station, Moraine Park, is located on the Big Thompson River on the Park's east side. The other station, Baker Gulch, is located on the Colorado River on the west side of the Park. Long-term monitoring and research is also being conducted in the Loch Vale drainage.

Additional long-term wilderness monitoring programs will be developed and conducted to determine the effects of recreational use and management activities on aquatic resources and to develop more measurable standards such as using mean concentrations of selected nutrients (e.g., nitrates, sulfates, phosphates), and identification and monitoring for indicator species. Periodic sampling of lakes and streams will be done and tested at the Park's lab or other certified water quality lab for presence of such things as *Cripto* and *Giardia*. Areas suspected of contributing or causing water quality problems may be monitored more frequently.

2.1.2.4.3 Water Quantity. The Park will establish and use water in conformance with federal and state laws and procedures. Water is currently available for both consumptive and in situ purposes for those portions of the Park lying east of the Continental Divide. Both federal reserved water rights and state appropriative water rights were decreed in Case No. CW-8439-76. In addition, the Park will continue with its policy as delineated in the 1976 Master Plan "To pursue all possibilities of removing water rights and storage facilities and to utilize the authority of the Secretary of the Interior to ensure that those persons or companies having water rights will manage their collection and reservoir systems to provide maximum protection to the natural and cultural resources. Whenever possible, water right holders will be encouraged to relocate reservoirs outside the Park and to eliminate comparable storage rights within the interior of the Park..."

The Park will also strive to obtain a decree comparable to CW-8439-76 for water rights located within the Park on the west side of the Continental Divide.

2.1.2.5 Fire Management

Fire management activities conducted in wilderness will conform to the basic purposes of wilderness. The Park recognizes the need to integrate responsible fire, ecosystem and wilderness management practices with the protection of community and public safety. The Park's Fire Management Plan identifies the natural and historical role of fire in the wilderness and defines the appropriate management response to all wildland fires, including the full range of management alternatives from aggressive suppression to managing wildland fire for resource benefits.

The restoration of fire on the landscape is an important and immediate need. The longer the process is delayed, the more extreme the problem becomes. To restore natural fire regimes and maintain public safety, a systematic and comprehensive program of action with consideration for the immediacy of the need is critical. Both the Resource Management Plan and the Fire Management Plan call for the use of prescribed fire and hazard fuel reduction as critical management tools and as effective means to restore fire into the ecosystem.

In order to meet anticipated risk reduction needs, as well as maintain, sustain, and conserve native ecosystems, the Park is committed to monitoring and evaluating fire management needs so that appropriate action can be taken in a timely manner. Prescribed fires planned for implementation within the wilderness are intended to restore the natural role of fire to various park ecosystems, to reestablish a mosaic of fire history within the landscape and increase public and community safety, as identified in the Park's mission and goals statement.

It is critical to manage the forest fuels on park lands that may pose a risk to community and public safety. The Fire Management Plan identifies an extensive hazard fuel reduction program that is designed to increase community safety, protect National Park Service facilities, and provide increased protection for private developments adjacent to the Park boundary. Within these areas, a combination of treatments may be used to reduce hazard fuels including tree thinning, removal of dead and downed material, pile burning, and broadcast burning.

Actions taken to perform hazard fuel reduction projects, conduct prescribed fires and manage wildland fires will follow the Minimum Requirement Concept. They will be conducted in such a way as to protect natural and cultural resources and wilderness values. Application of the minimum requirement process and minimum/primitive tool procedures will be conducted as specified in the Wilderness Act (1964), NPS Management Policies (2000), NPS Director's Order #41 (1999) and this Backcountry/ Wilderness Management Plan.

Aircraft, motorized equipment (e.g., chainsaws, portable pumps, weed whackers, generators) and installations (e.g., portable weather stations, smoke monitoring devices, fire effects monitoring plots, communications equipment) may be allowed during hazard fuel reduction projects, prescribed fire operations, and wildland fire actions if determined to meet the minimum requirement.

A Minimum Requirement Analysis Worksheet (ROMO-180) will be completed for hazard fuel reduction projects and prescribed fire operations and will be included as part of the Project Proposal Form (ROMO-178) and/or Prescribed Fire Burn Plan. In the case of wildland fires, a Minimum Requirement Analysis Worksheet (ROMO-180) will be either included in the Wildland Fire Implementation Plan or as a component of the transition package and Wildland Fire Situation Analysis.

All wildland fires within wilderness, whether suppression actions or fire use actions, will be effectively managed considering wilderness resource values, while providing for public and fire personnel safety using the full range of strategic and tactical options. Wildland fire management response will include the application of minimum impact techniques and, if a suppression action, utilize minimum requirement suppression techniques.

All impacts of fire activities, whether wildland or prescribed, will be rehabilitated, at a minimum, as follows: stumps flush cut, firelines filled and camouflaged, water bars installed as necessary, temporary campsites cleaned and restored to natural conditions, and other effects of fire management activities will be restored to natural conditions.

For wildland fires that exceed initial attack or that are being managed for resource benefits, a Delegation of Authority document will outline specific requirements to be adhered to, in the case that the management of these fires within wilderness is turned over to an Incident Management Team.

2.1.2.6 Cultural Resources

Cultural resources are true treasures of our past and important parts of our heritage. Physical remains serve both as commemorative sites for local communities and as interpretive places for visitors to the area. Documentation of resources now gone, in the form of written records and photographs, provide a window into our past and are important in keeping history alive. Whether conducting inventories, restoring historic structures or documenting objects and sites then allowing them to “melt into the land”, wilderness and cultural resources managers will work closely to insure that both wilderness and cultural resources are effectively documented and protected in ways that best preserve the integrity of both resources.

2.1.2.6.1 Management of Cultural Resources. Cultural resources (e.g., historic sites, structures, objects) in the backcountry/wilderness will be preserved through a range of management actions (e.g., inventories, documentation, photographic record, stabilization). Management will be consistent with the National Historic Preservation Act of 1966 (as amended) the Archaeological Resources Protection Act of 1979 (as amended), NPS-28, the Wilderness Act and RM-41: Wilderness Preservation and Management. Those actions within wilderness will be reviewed through the Minimum Requirement Analysis Process (Section 2.1.4.1). The challenge is to determine how cultural resources can be best managed in ways compatible with preserving other wilderness values.

2.1.2.6.2 Inventory and Research. Physical remains will be inventoried and evaluated for the National Register of Historic Places. Archeological research, including excavations, may be permitted after review through the Project Proposal/Clearance Process, including a Minimum Requirement Analysis. Included is the collection of specialized soil samples from cores or excavation units. Remote sensing devices such as ground penetrating radar, resistance, conductivity, magnetometer, and low level aerial photography using electric or gas powered remote controlled airplanes may be permitted for cultural research purposes. Proposals for the use of motorized and mechanical equipment for cultural resource work (e.g., archeological coring and excavations, remote control airplanes, maintenance of historic structures) will be reviewed through the Minimum Requirement Analysis Process. All research will be consistent with the Rocky Mountain National Park Research Design for Archeology (Butler 1997).

2.1.2.6.3 Site Protection. Site protection is essential. Although it is very difficult to document or quantify, such occurrences, unauthorized collecting of artifacts has occurred since the Park was established in 1915. Vandalism is mostly associated with the moving, removing, and rearranging rocks from prehistoric sites, and logs at the remains of historic cabins. Recent research indicates that the collection of arrowheads, scrapers, knives, pottery, tin cans and other historic items appears to be an ongoing activity, especially in the backcountry/wilderness. Expanded law enforcement and educational efforts are needed to address these problems. Information about the protection and interpretation of cultural resources will be conveyed through programs, brochures and wayside exhibits at trailheads. Only those signs necessary to protect cultural resources will be allowed within wilderness (Section 2.1.4.8.13). Designated camp areas or sites and trails may be relocated if found to have significant adverse impacts to cultural resources due to location or visitor use.

2.1.2.6.4 Work Projects. Projects to rehabilitate, reconstruct, restore, alter, allow benign neglect or remove historic structures and cultural landscapes would impact cultural resources. To ensure the proper protection of cultural resources, all specific projects within wilderness will be evaluated through the Project Proposal/Clearance Process, including a Minimum Requirement Analysis, and must receive approval from the Superintendent.

Routine ground disturbing activities such as the maintenance, minor rerouting or reconstruction of trails; maintenance, rehabilitation, revegetation of campsites or destination areas (e.g., waterfalls and lakes) have potential to affect cultural and archeological resources. All work crews will follow the established protocols developed by the Park's Archeologist (Appendix B). Actions not covered by these protocols, special projects and research activities that may impact cultural resources will be reviewed through the Project Proposal/Clearance Process to determine what actions are necessary. Minimum Requirement Analysis will be a part of the project planning and decision process for treatment and maintenance.

2.1.2.6.5 Native American Concerns. The locations of Native American sites or areas identified from the ethnographic overview study, or from personal communication from Native Americans will be field checked and recorded as archeological sites. Such recording is important for addressing management and treatment for resources that might be included under the American Indian Religious Freedom Act, the Native American Graves and Repatriation Act, and Executive Order 13007 of 1996 on "Indian Sacred Sites" and as Traditional Cultural Properties under the National Historic Preservation Act.

2.1.2.6.6 Historic Structures. There are 18 historic structures located within the backcountry or recommended wilderness and have been either listed in or determined eligible for listing in the National Register of Historic Places (Appendix C, Table 10).

The patrol cabins, ranger station, and Willow Park Stable are used seasonally by park staff. The Shadow Mountain Fire Lookout and shelters are used sporadically by park staff involved in fire monitoring and search and rescue operations respectively. These properties will be preserved and their associated traditional uses will continue within backcountry and wilderness. These historic structures should be inspected annually to assess their physical condition. All cyclic maintenance and needed repairs should follow the Secretary of the Interior's "Standards for Rehabilitation" and the Minimum Requirement Concept.

The four historic structures on the former Reichhardt property are vacant and in a deteriorated state. The historic resource should be recorded to Historic American Buildings Survey (HABS) Standards. The future of these structures needs to be discussed and determined by the park management staff in consultation with the park archeologist. Due to the location of the structures, commercial or adaptive use is not appropriate in this wilderness setting.

2.1.2.6.7 Unevaluated Historic Structures in the Backcountry/Recommended Wilderness. The small developed area located at the southern edge of Moraine Park contains numerous park and privately owned cabins and cottages dating to the turn-of-the century. Part of this area is identified as a Potential Wilderness Addition and may contain historic structures and cultural landscapes. The use of privately owned property in this area is not affected by this plan. The linear collection of buildings has potential for listing in the National Register of Historic Places as a "residential historic district." These properties, and any other that may be identified, are documented and evaluated for the National Register of Historic Places.

2.1.3 Visitor Experience Conditions

2.1.3.1 Solitude

Within the definition of Wilderness in Section 2(c) of the Wilderness Act it states, "An area of wilderness... has outstanding opportunities for solitude or a primitive and unconfined type of recreation;...".

It might be hard to believe that outstanding opportunities for solitude would be possible with visitation exceeding 3 million a year since 1994. However, many of visitors never leave the paved roads and developed areas. National trends do indicate increasing backcountry/wilderness day use and overnight use in the Park has seen a slow, but steady increase. Fortunately, use is highly dependent on things such as season of year, day of week, time of day, weather, and access. Thus, experiencing solitude is possible anywhere in the Park depending on the circumstances.

Less solitude exists where high concentrations of use occur in popular areas (e.g., Bear Lake, Longs Peak, Lulu City) or within a few miles of a trailhead, generally Management Class 4 areas. Due to access and management actions (e.g., no trails, few facilities) the opportunity is greatest in Management Classes 1 and 2. Those visitors who seek solitude only need to plan accordingly.

2.1.3.1.1 Group Size Limits. Limits on group size for overnight use are discussed in Section 2.1.4.4. There are currently no mandatory day use limitations for the general public. Regulations or restrictions of day use may be implemented if significant social impact or resource damage occurs as a result of unregulated day use and also to protect threatened and endangered species as mandated by the Threatened and Endangered Species Act. Information will continue to be gathered on use levels and actual group sizes.

To avoid impacts and future imposed limits, the Park recommends and encourages day use group size limits based on information gathered from Wilderness Monitoring Logs. The recommendation in Management Classes 1 and 2 is a maximum day use group size of 7 visitors and in Management Class 3 a maximum day use group size of 20 visitors. In Management Class 4 there is no limit day use group size recommendation; however, large groups are encouraged to split up and travel separately.

2.1.3.2 Risk and Challenge

One of the great values of wilderness is its wildness, including the unpredictability of nature's elements and its general lack of human-constructed facilities. Wilderness provides opportunities to enjoy nature in the purest form still available, and for personal challenges through risk, self-sufficiency, and the special skills required for travelling and camping within wild areas. Visitors are expected to accept wilderness largely on its own terms, without the comfort, convenience, or safety of modern facilities. Visitors must accept and be prepared for the potential risks from weather, geographic features, wildlife encounters, and other natural phenomena, that are inherent in a wilderness experience.

The Park will not totally eliminate or unreasonably control risks that are normally associated with the wilderness environment. The Park will make available information about potential hazards,

recommended precautions, Leave No Trace skills and ethics, park guidelines and regulations, and the benefits of a wilderness experience.

Wilderness visitors have a wide array of knowledge and skills. Identifying Management Classes enables visitors to experience a range of opportunities for risk, challenge, and self-sufficiency. Management Classes 1 and 2, the more pristine classes, that provide few or no facilities and are further from civilization, offer the greatest opportunities for risk, challenge, and self-reliance. Management Classes 3 and 4, the more developed classes, with trails, bridges and other facilities, and a greater chance of seeing others, offer risk, challenge, and self-reliance at a lower level, while still providing a wilderness experience.

2.1.3.3 Access/Visitor Activities/Special Uses

2.1.3.3.1 Accessibility.

Wilderness Use By Persons With Disabilities

- (1) In General--Congress reaffirms that nothing in the Wilderness Act is to be construed as prohibiting the use of a wheelchair in a wilderness area by an individual whose disability requires use of a wheelchair, and consistent with the Wilderness Act, no agency is required to provide any form of special treatment or accommodation, or to construct any facilities or modify any conditions of lands within a wilderness area to facilitate such use.
- (2) Definition--For the purposes of paragraph (1), the term wheelchair means a device designed solely for the use by a mobility-impaired person for locomotion that is suitable for use in an indoor pedestrian area.

Section 507(c), 104 Stat. 327, 42 U.S.C. 12207
Americans with Disabilities Act of 1990 (ADA)

- (3) In meeting the goal of accessibility, emphasis will be placed on ensuring that persons with disabilities are afforded experiences and opportunities along with other visitors, to the greatest extent reasonable.

NPS Management Policies 2001, 9.1.2

The National Park Service has legal obligations to make available equal opportunities for people with disabilities in all our programs and activities. Management decisions responding to requests for special consideration to provide for wilderness use by persons with disabilities must be in accord with the Architectural Barriers Act of 1968, the Rehabilitation Act of 1973 (amended in 1978), and Section 507(c) of the Americans with Disabilities Act of 1990. Such decision should balance the intent of the access and wilderness laws and find a way of providing the highest level of access for the disabled with the lowest level of impact on the wilderness resource.

While the NPS is not required to provide any modification or special treatment to accommodate accessibility by persons with disabilities, managers should explore solutions for reasonable accommodations when not in conflict with the Wilderness Act (e.g., barrier free trails, accessible campsites). Any facilities, built or altered, must meet current accessibility guidelines. The standards by which park trails are constructed and maintained are discussed in Section 2.1.4.7, Trails Management.

Rocky Mountain National Park has taken proactive steps in accessibility to its backcountry in several ways. The Park has constructed frontcountry accessible trails at Sprague Lake, Lily Lake, Bear Lake, and Coyote Valley. These trails are not considered to be in the backcountry/wilderness. The Park has constructed an accessible campsite and Sprague Lake, and identified additional sites that are nearly accessible. The Park has inspected park facilities for accessibility and recommended solutions for areas found to be out of compliance. Park programs have been reviewed for accessibility by persons with disabilities. Uses and enjoyment of the Park backcountry and wilderness can be considered a program. Areas where the Park may consider for areas of improvement include: information available on the challenge level associated with specific activities in the Park's backcountry, and identification of barriers associated with backcountry facilities such as trails and campsites.

Wheelchairs. Wheelchairs are appropriate in wilderness only if they meet the definition of the ADA. The intent of this definition is that a wheelchair is a person's primary mode of locomotion, manual or electric, that is suitable for use in indoor pedestrian areas. This definition does not include wheelchairs that function like an all terrain vehicle. This definition is also intended to ensure that persons using wheelchairs are reasonably accommodated in wilderness without the need to compromise either the wilderness resource and its character.

Service Animals. The NPS will allow service animals within wilderness when it makes these areas accessible and usable by persons with disabilities. The ADA defines a service animal as any guide dog, signal dog, or other animal individually trained to provide assistance to a person with a disability. Trained service animals are permitted in wilderness when they are required for day-to-day activities by persons with disabilities. The training of service animals in wilderness is only allowed with specific permission from the Park Superintendent. Documentation must be provided that the animal is legitimately in training to be a service animal. In addition, documentation of current shots (e.g., distemper, rabies) should be readily available.

2.1.3.3.2 Day Use. Appropriate day use activities in the Park's backcountry/wilderness include hiking, horseback riding, fishing, climbing, mountaineering, trail running, photography, studying nature, viewing wildlife, nordic skiing, snow boarding, and snowshoeing. Uses that are not appropriate or allowed include snowmobiling, dog sledding, hang gliding, and bicycling. As new activities emerge, they will be analyzed for appropriateness in wilderness.

Day users make up a large percentage of visitors to the backcountry/wilderness. Past studies estimate day use of about 700,000 visitors per year; however, currently the actual amount or impact of day-use is unknown. Several research studies of day use have been proposed. One is to begin during the summer of 2001. Others, as identified in the Resource Management Plan, will be conducted as funds become available. Additional research needs will be explored. Information from these studies will provide a basis for informed decision-making about day use management in the future. In the mean time, the Park will collect trail use data with electronic trail counters at various locations to determine use trends and monitor popular destination areas for impacts.

In Management Classes 3 and 4, day users are encouraged to travel and stay on designated trails. Users should spread out while traveling in Management Classes 1 and 2. In all Management Classes, users should stay on durable surfaces (e.g., trail, rock, snow) while stopping for any period of time to rest or recreate.

2.1.3.3.3 Public Use of Motorized Equipment and Mechanized Transport. The Wilderness Act prohibits the use of motor vehicles, motorized equipment, motorboats, and other forms of

mechanical transport, except as necessary to meet the minimum requirements for administering an area as wilderness. The use of snowmobiles is prohibited in the backcountry and wilderness areas of the park. The use of motorized watercraft is prohibited on all park waters.

As a general rule, public use of any form of mechanical transport, including bicycles, wheelbarrows, and person or horse drawn carts is prohibited, with the exception of manual or motorized wheelchairs (as defined by the Americans with Disabilities Act and Title 36, CFR) used by disabled visitors.

Bicycles are permitted on all roads open to motor vehicles. Bicycles are prohibited on all other trails, routes, and areas unless otherwise designated by the Superintendent (36 CFR 4.30a). Refer to Section 2.3.2.3.4 Road Closures. Possessing a bicycle in a wilderness area is prohibited (36 CFR 4.30(d)(1)). Public use of motorized equipment, such as chainsaws, rock drills or electrical generators, is prohibited (36 CFR 1.12(a)(1-3)).

2.1.3.3.4 Pets. Dogs, cats and other pets are not allowed in the backcountry/wilderness and on established trails of RMNP (36 CFR 7.7 (d)) in order to protect backcountry/wilderness resources and other visitors' experience. Pets can disturb wildlife and visitors. In addition, wildlife can potentially cause harm to pets and pet owners.

The exceptions to this are on certain roads that, after autumn seasonal road closures, convert to winter backcountry road status. For a list of those roads which are closed in the winter that allow pets, on leash, refer to Section 2.1.3.3.5 Road Closures.

The use of search dogs may be authorized during emergencies such as search and rescue or law enforcement operations. The training of search dogs in the backcountry/wilderness is only allowed with specific permission from the Park Superintendent. Guidelines for service animals (animals individually trained to provide assistance to persons with a disability) are found in Section 2.1.3.3.1 Accessibility.

2.1.3.3.5 Road Closures. Park roads are outside of wilderness and are not subject to wilderness standards. However, due to weather and road conditions part of the year, it is necessary to seasonally close portions of certain park roads. During these periods, it is appropriate to manage these areas differently (e.g., backcountry winter trail status, winter road status) from when the road is open to vehicular travel. Closures and other restrictions are imposed under the discretionary authority of the Park Superintendent, Title 36, Code of Federal Regulations, Chapter 1 (36 CFR 1.7(b)).

After autumn seasonal road closures have taken effect, the following roads convert to winter road status and are closed to motor vehicle traffic: Trail Ridge Road, Fall River Road, Upper Beaver Meadows Road, Moraine Park Campground: closed loops, Endovalley Road, Aspenglen Campground Road, Wild Basin Road, Glacier Basin Campground Road, Fern Lake Road, High Drive and Twin Sisters Trailhead Access Road. (Section 1.5, Closures and Public Use Limits (a)(1)(iv)). Administrative motor vehicle travel is permitted on these roads during autumn closing and spring opening operations.

Regulations concerning pets, 36 CFR 7.7(d) and bicycles 36 CFR 4.30 apply to certain roads while in winter road status.

Pets and bicycles are allowed on the following roads that convert to winter road status: Upper Beaver Meadows, Moraine Park Campground (closed loops), Endovalley Road, Aspenglen Campground, High Drive, Twin Sisters Trail Access roads.

Pets and bicycles are not allowed on the following roads that convert to winter trail status: Wild Basin Road, Glacier Basin Campground, Fern Lake Road.

Pets and bicycles are not allowed on Trail Ridge Road and Fall River Road from the day the road is closed for the winter season until the first Saturday in April, when park road crews begin spring opening operations.

Trail Ridge Road and Fall River Road status differs from all other park roads relative to closures in that both these areas close due to snow accumulation and the reversion to a true backcountry trail condition with accessibility primarily by ski or snowshoe only. It is inappropriate to continue to allow pets and bicycles access via these routes once they are closed for the winter. Springtime plowing and roads maintenance operations that begin in early April facilitate the reversion once again from trail to road status. Pets and bicycles are permitted on these two roads following the startup of spring opening as posted.

2.1.3.3.6 Campfires. Campfires are allowed only in specific designated camp areas during the summer. Where allowed, metal fire grates will be provided and must be used. Firewood will not be provided and users will be encouraged to pack in their own or gather wood no larger than wrist size from a wide area around the camp. Any proposal to add a wood fire to a camp area must go through Project Proposal/Clearance review, including Minimum Requirement Analysis. During periods of high fire danger, the Superintendent may put emergency campfire closures into effect.

2.1.3.3.7 Commemorations/Memorialization. Historic burial plots and commemorative features, such as plaques or memorials, that have been previously approved and included in wilderness may be retained. No new additions may be made.

The scattering of human ashes from cremation within the backcountry/wilderness may be allowed. A special use permit issued by the Chief Ranger is required, with specific terms and conditions to ensure that wilderness conditions and the visitors' wilderness experience are not adversely impacted.

2.1.3.3.8 Winter Use. Opportunities for winter travel and recreation abound in the RMNP backcountry/wilderness. There is a wide range of experiences to be found, from short, easy trips at lower elevations to multi-day mountaineering adventures at higher elevations. Due to the varying terrain, high elevation, extreme conditions and sudden changes in weather, winter activities can be risky and dangerous.

Winter activities include hiking, crosscountry skiing, snowboarding, snowshoeing, ice climbing, and mountaineering. Motorized snow machines (e.g., snowmobile, snowcat) and dog sledding are prohibited within the backcountry/wilderness and roads that convert to winter backcountry road status. Weather and trail/route conditions can change rapidly in the mountains. Sudden storms, high winds, cold temperatures, and avalanche potential are major threats. Users should be prepared for extreme conditions at any time. Park staff will provide the best available information on current conditions and winter safety.

Travel is generally done along the park trail system, roads closed to vehicular travel during the winter, or winter routes suitable for travel when snow covers the ground. Most trails are not maintained during the winter, thus travel may be challenging. Trails may be cleared of fallen trees. Routes that do not follow the park trail system or closed roads will not be cleared or enhanced in any way. Many trails/routes lead into high avalanche prone areas and should only be traveled by experienced users. Trails below Bear Lake leading to Glacier Basin Campground, the Visitor Transportation System shuttle bus parking lot, and Hollowell Park are the only marked trails. They are marked with orange metal markers. Markers should be placed so that from any marker another one can be seen in either direction. All other trails/routes require winter route finding skills.

Winter camping is allowed in the backcountry/wilderness and requires a permit. Refer to Section 2.1.4.4, Backcountry Permit/Reservation System for guidelines.

2.1.3.3.9 Special Events. Special park uses are defined as activities that require written permission from the National Park Service (Directors Order and Reference Manual 53). Special park uses that require the Superintendent's approval include sports events, pageants, regattas, public spectator attractions, entertainments, ceremonies, and similar events. Permits for special events within wilderness will not be issued by the Superintendent if the activity is inconsistent with wilderness resources and character, or do not require a wilderness setting to occur (Directors Order and Reference Manual 41).

Special events that are inconsistent with wilderness objectives include: activities that may adversely impact wilderness resources; are contrary to the purposes for which wilderness has been established; unreasonably impair the atmosphere of peace and tranquility maintained in wilderness; unreasonably interfere with wilderness management activities of park staff, visitors or concessionaires; are a clear and present danger to public health or safety; will result in significant conflict with other existing uses (e.g., animal, foot, or watercraft races, physical endurance tests of a person or animal, organized survival exercises, war games).

Permits will include terms requiring full compliance with wilderness regulations and guidelines. In addition, permits may include special terms and conditions to ensure that wilderness resources and the visitors' wilderness experience are protected. These include limitations on type of equipment used, or the time, length of time, or location where the event may take place.

2.1.3.3.10 Watercraft Use. The operation of motorboats is prohibited on all waters of the Park (36 CFR 7.7(c)(1)). The use of non-motorized watercraft (e.g., canoe, kayak, sailboat) is permitted with the exception of Bear Lake (36 CFR 7.7(c)(2)). The opportunity to use watercraft in the Park is fairly limited; however, since the majority of the streams, rivers, and lakes are relatively small and in remote locations with difficult access. Users should take extreme care during put in and take out to avoid impacts to fragile aquatic resources (vegetation trampling, bank erosion, spawning beds).

2.1.3.3.11 Private Stock Use. In RMNP, stock is defined as horses and pack animals. Horses, burros, mules, and llama are designated as pack animals (36 CFR and RMNP Compendium). No other animal may be used as a pack animal. Stock use has been a part of the Park's tradition for many years. The use of stock must be balanced with efforts to protect natural resources and unique ecosystems found in the Park.

Specifics on commercial stock use are addressed in the Park's 1994 Commercial Horse Use Management Plan. Nothing in this section changes or supersedes standards and guidelines

identified in the 1994 Commercial Horse Use Management Plan.

Horses and pack animals may be used only on park trails designated for stock use. Approximately 282 miles of trail are open to commercial and private stock use. This represents about 80% of the total maintained trail network. The remaining 20% are closed to all stock use, with the exception of a few trails where llamas are allowed. Refer to Appendix C, Table 6b for a list of trails open and closed to stock use. Crosscountry travel and off-trail use is not allowed parkwide.

In the interest of public and stock safety, due to narrow trails, steep terrain and visitor use levels, it is recommended that only well-broken, properly shod, gentle stock in good physical condition be used in the Park. The riding of horses and other stock at a speed greater than a trot is not permitted. The maximum number of animals in one group (string) is 20 and multiple strings must be separated by at least 15 minute intervals. The use of stock-drawn equipment is not permitted.

The spread of noxious weeds and exotic plant species in the backcountry and wilderness is a serious and growing problem. In order to mitigate the spread of these plants, possessing, storing or transporting any hay, straw, mulch, or forage which is not certified as free of noxious weeds and seeds by a certified State or County Agricultural Officer is prohibited anywhere in the Park. In addition, any hay, straw, mulch, or forage, either certified or non-certified weed free, beyond any park trailhead is prohibited (RMNP compendium). The grazing of stock is not allowed. Backcountry/wilderness stock users must use feed in the form of pelletized feed, hay cubes, or grain products during any trip.

To prevent resource damage, as well as possible injuries to stock and riders/users, those portions of Flattop, Tonahutu Creek, and North Inlet trails which are above treeline are closed to all stock use annually from October 15 to July 31. These trails may be opened prior to or after August 1, depending on environmental conditions (e.g., snow pack, moisture, erosion). Seasonal closures of any trail to horse and pack animal use may be in effect at various locations throughout the Park when necessary for resource protection or safety reasons. Such closures will be posted and published.

Trails open to stock have hitchrails at various locations along the trail (e.g., popular destinations, end of route). Stock users are encouraged to use these locations for extended stops. Loose herding (e.g., hobbles, bell mare) of stock is not allowed. If it is necessary to stop for a short period of time, in an area without hitchrails, a minimum impact technique should be used to keep stock physically controlled and to lessen impacts to trees, roots and vegetation. Users should clean up after their stock.

Stock is allowed overnight only in designated stock campsites. There are 10 stock campsites for all types of stock and 3 additional campsites where only llama are allowed. A Backcountry Permit is required; refer to Section 2.1.4.4.1 for requirements. Hitchrails are provided at all stock campsites (posts at llama only campsites), and stock must be securely tied to the hitchrail (post) overnight. No public corrals are provided.

2.1.3.3.12 Commercial Services. Commercial services are defined as activities or services conducted in a park, by private parties, for which a fee is charged. They include those provided by both for-profit and non-profit enterprises. Concession operations are one segment of the commercial services spectrum. Commercial activities are managed under a variety of laws and guidelines. These include the Wilderness Act, the Concessions Policy Act, National Park

Service Management Policies, NPS regulations (36 CFR 51), NPS Concessions Management Guidelines (NPS-48), and the National Parks Omnibus Management Act of 1998: Title IV - National Park Service Concessions Management.

The Wilderness Act generally prohibits commercial use within wilderness stating that "there shall be no commercial enterprise... within any wilderness area." However, the Act permits such services if they are necessary to meet wilderness management objectives: "commercial services may be performed within... wilderness areas... to the extent necessary for activities which are proper for realizing the recreational or other wilderness purposes of the areas."

NPS Management Policies state that commercial services may be authorized in wilderness if they meet the "necessary and appropriate" tests of the Concessions Policy Act and Wilderness Act, and if they are consistent with a park's wilderness management objectives. Such services must also contribute to public enjoyment of wilderness values or provide opportunities for primitive and unconfined types of recreation.

The Park is currently working on a Commercial Services Management Plan. When completed, it will identify the optimum level of commercial services to be provided and their complementary role in accomplishment of the park mission. It will identify services, activities or conditions that are and are not "necessary and appropriate" for each backcountry/wilderness Management Class and that enhance the enjoyment and understanding of the park values, while protecting backcountry/wilderness resources.

Commercial services that are appropriate in the backcountry/wilderness generally consist of guided activities. Guided activities that the Park has determined meet the "necessary and appropriate" requirement in the backcountry/wilderness include climbing, hiking, backpacking, fishing, horseback riding, snowshoeing, crosscountry skiing, painting, and photography. Specific requirements and guidelines for these activities are outlined in current contracts and permits. They will be further discussed in the Commercial Services Management Plan when completed.

2.1.3.3.13 Native American Access. Wilderness, for some Native American groups, is a place of profound tribal history, traditional use, or a homeland. Native Americans will be permitted access within the backcountry/wilderness for sacred or religious purposes consistent with the regulations and intent of the American Indian Religious Freedom Act, EO13007 of May 24, 1996 on "Indian Sacred Sites", the Wilderness Act, related laws, policy and according to criteria for special park uses. Native American groups seeking to perform ceremonies in the Park should contact the Superintendent in advance so that the Park can address type of access issues and assist with insuring that ceremonies are undisturbed.

2.1.3.3.14 Summit Registers. Summit registers have traditionally been used in the mountains of Colorado to record successful attempts. They can be useful during Search and Rescue operations to determine possible point last known locations. Summit registers on mountain tops that historically have had them may remain in place. No new registers may be put in place. The registers must be as small and unobtrusive as possible. A sign or other marking may not be used to identify the location of the register. Park staff will not maintain or re-supply existing registers with paper and pencil.

2.1.3.3.15 Hunting/Fishing. Hunting is not permitted within RMNP. There are five hunting access and game transportation corridors, within the backcountry/wilderness, through which hunters may pass. These are the Never Summer Ranch road, Bowen Gulch trail, Baker Gulch

trail, Twin Sisters trail and North Boundary trail via Cow Creek trail. Specific information about these corridors can be found in the annual Rocky Mountain National Park Compendium (36 CFR 1.7(b)).

Sport fishing is permitted in the Park. A valid Colorado fishing license is required. State and special park regulations apply. Fishing regulations are based on management objectives described in Section 2.1.2.2, Fish and Wildlife and the Resource Management Plan. Regulations will be reviewed and may be revised annually. Current regulations can be found in the annual Superintendent's Compendium 36 CFR 1.7(b).

2.1.3.4 Impacts from Civilization

The National Wilderness Preservation System was established "In order to assure that an increasing population, accompanied by expanding settlement and growing mechanization, does not occupy and modify all areas within the United States and its possessions...". The Wilderness Act characterizes wilderness as a place retaining its primeval character. Outstanding opportunities for solitude or primitive and unconfined recreation are to be ensured. Wilderness is to be a place where one can step back to an earlier time and enjoy the wildness of America without the trappings of present-day civilization.

One of the goals of this plan is to "protect and preserve... the integrity of the wilderness character for present and future generations". Reminders of our technological civilization can detract from the wild character of the Park, and destroy the sense of solitude. Wilderness is a place to escape from the stresses, pressures, and reminders of everyday life.

2.1.3.4.1 Visitor Use of New Technology. Visitor minimum impact education will include an emphasis on leaving civilization's technology behind to more fully experience the unique qualities of wilderness, specifically its primitive, wild character and opportunity for challenge, risk, and self-sufficiency. The use of potentially intrusive technology including electronic communication devices (e.g., cellular phones and pagers), radios and computers will be discouraged, except in emergency situations, to protect wilderness character.

2.1.3.4.2 Visual Quality. Two of the basic qualities of wilderness character are solitude and pristine scenery. Minimizing the visual presence of other people provides greater opportunities for visitors to feel a sense of solitude. Leave No Trace education will encourage visitors to minimize their effects on visual aesthetics. Examples might include selecting equipment in colors that blend in with the natural environment.

Activities outside wilderness can also affect visual quality. Land practices outside park boundaries may affect viewsheds. The Park will coordinate with adjacent landowners to make them aware of wilderness concerns. Night sky visibility is becoming more rare as urban development continues to occupy an expanding area. The opportunity for this and future generations to see a dark, star-filled night sky is a wilderness value to be protected. Rocky Mountain National Park will work to minimize the intrusion of artificial light into the natural darkness of wilderness from within the park boundary and will encourage park neighbors and local government agencies to do the same outside the park. Both of these topics were discussed and addressed in the Rocky Mountain National Park Related Lands Evaluation of 1998.

One of the significant values of wilderness is clean air and outstanding visibility of wilderness features. Rocky Mountain National Park is designated a Class I air quality area under the Clean

Air Act. The National Park Service will work with managers of potential polluting sources to protect air quality. This will ensure minimal or no air quality degradation, and help restore wilderness air quality to the highest level practicable.

2.1.3.4.3 Natural Quiet. National Park Service Management Policies state that intangible qualities, such as natural quiet and natural sounds associated with the physical and biological resources of the parks, are values to be protected. Activities that cause unnecessary or excessive unnatural sounds will be monitored. Action will be taken to prevent or minimize their adverse effects on wilderness resources or associated visitor enjoyment. Sound devices that create unreasonable audio disturbances are prohibited.

2.1.4 Administrative Conditions and Management Activities

2.1.4.1 Minimum Requirement Concept

The Wilderness Act of 1964 states in section 4(c) that *"...except as necessary to meet the minimum requirements for the administration of the area for the purpose of this Act (including measures required in emergencies involving the health and safety of persons within the area) there shall be no temporary road, no use of motor vehicles, motorized equipment or motorboats, no landing of aircraft, no other form of mechanical transport, and no structure or installation..."* within a Wilderness area. The Act allows for the administrative exception, but it is an exception not to be abused and to be exercised very sparingly and only when it meets the test of being the minimum necessary for wilderness. National Park Service Policy dictates that all management decisions affecting wilderness must be consistent with the Minimum Requirement Concept.

The Minimum Requirement Concept enables managers to examine and document if a proposed management action is appropriate in wilderness, and if it is, what is the least intrusive equipment, regulation, or practice (minimum tool) that will achieve wilderness management objectives. The completion of this process assists managers in making informed and appropriate decisions concerning actions conducted in wilderness.

In wilderness, how a management action is carried out is as important, if not more important, than the end product. When determining minimum requirement, the potential disruption of wilderness resources and character will be considered before, and given significantly more weight than, economic efficiency and convenience. If a compromise of wilderness resources or character is unavoidable, only those actions that preserve wilderness character in the long run and/or have localized, short-term adverse impacts will be acceptable.

2.1.4.1.1 The Process. To apply the Minimum Requirement Concept at RMNP, a Minimum Requirement Analysis will be completed for any management action, including but not limited to, natural and cultural resource projects, administrative facilities, trail and camp area projects and research, within wilderness. It is the responsibility of the lead person for any proposed action to complete a Minimum Requirement Analysis Worksheet (ROMO-180). Depending on the level of review required, the Minimum Requirement Analysis Worksheet (ROMO-180) may be used alone or in conjunction with the other park review processes, such as Project Proposal/ Clearance or Flight Requests.

The Minimum Requirement Analysis is a two-part process. Part A helps determine whether or not the proposed management action is appropriate or necessary for administration of the area as wilderness, and does not pose a significant impact to wilderness resources and character. Part B describes alternatives for the proposed action in detail, and evaluates each, to determine

the techniques and/or types of tools and equipment (minimum tool) needed to ensure that overall impacts to wilderness resources and character are minimized. The Minimum Requirement Analysis Worksheet (ROMO-180) and instructions for its completion can be found in Appendix D.

Recurring actions, such as spring trail opening, campsite rehabilitation and management prescribed fire, may be analyzed and the minimum requirement decision and specific guidelines documented in an approved management plan (e.g., Backcountry/Wilderness Management Plan, Fire Management Plan). This eliminates the necessity of the action being analyzed each time it is conducted. Any action not analyzed and approved in a current management plan, or any deviation from an approved action and its specific guidelines, must be analyzed on a case-by-case basis.

The Minimum Requirement Concept is not intended to limit choices. It challenges managers to examine every planned management action to determine if it is appropriate and necessary in wilderness and to choose the best alternative that would least impact unique wilderness resources and character. The purpose and philosophy of wilderness must be considered when evaluating alternatives. Wilderness goals, objectives and desired future conditions must be well understood by anyone proposing and/or analyzing actions.

2.1.4.1.2 Tool and Equipment Use. Life and health threatening search and rescue, medical incidents or environmental emergencies which seriously threaten wilderness resources may require a "higher degree" of minimum requirement than most wilderness management actions. The appropriate minimum requirement for emergencies will be selected by determining what tool/technique will meet emergency and wilderness objectives, while best protecting human health and safety.

Stricter standards will be in place for the use of motorized equipment and mechanical transport in non-emergency actions. In Management Class 1 areas, hand tools and traditional practices will routinely be used. Motorized equipment and mechanical transport will not be allowed, except during emergency operations or when absolutely critical for the protection of natural or cultural resources as determined on a case-by-case basis through a Minimum Requirement Analysis and approved by the Superintendent). In Management Class 2, 3 and 4 areas, hand tools and traditional practices will be used whenever possible. Motorized equipment and mechanical transport will not routinely be used, unless first being reviewed using the Minimum Requirement Analysis Worksheet or approved in a current management plan (e.g., Backcountry/Wilderness Management Plan, Fire Management Plan).

For actions which motorized equipment or mechanical transport uses are approved, they will be planned to minimize impacts to park users and resources by utilizing the least obtrusive and impacting schedules. Season of year, day of week and time of day should be considered. Any proposed use of motorized equipment, except in emergency situations, on holidays and weekends between Memorial Day and June 30th or anytime between July 1st and Labor Day will require that a Minimum Requirement Analysis Worksheet be prepared and the action approved by the Assistant Superintendent. This will be done on a case-by-case basis (e.g., special project) or on a programmatic level (e.g., trail work) in an approved management plan (e.g., Backcountry/Wilderness Management Plan, Fire Management Plan).

2.1.4.2 Aircraft Use

Rocky Mountain National Park is the only unit in the Service that has a federally legislated ban on commercial tour overflights. This ban was enacted by a 1998 Act of Congress that made permanent, a temporary ban previously issued by the Federal Aviation Administration (FAA). However, other flights over the Park are allowed including general aviation (subject to a FAA 2,000 ft; AGL advisory), high level commercial aircraft, military air traffic, and administrative flights for emergency operations (e.g., search and rescue, wildland fire), research, and other administrative uses as deemed necessary by the Superintendent.

The Park Aviation Management Plan (AMP) provides guidelines for use of aircraft on park missions. The AMP establishes approved procedures for official use and safe operations, and sets direction to minimize the number of NPS flights so as to protect park resources and the visitor experience. There are two types of administrative flights, non-routine and routine flights. The following guidelines for aircraft use within wilderness are based on the AMP and NPS Management Policies. For more specific criteria refer to the AMP.

2.1.4.2.1 Non-Routine and Routine Flights

- 1) Non-routine flights are for emergencies only and exempt from the normal flight approval process. Because of their life or health threatening nature, these types of flights cannot be scheduled in advance and will often occur in both approved and non-approved landing zones. Examples of non-routine flights for emergencies include search and rescue operations, medical evacuations, emergency fire operations, law enforcement emergencies, critical radio repeater repair, administrative emergencies such as life threatening situations, those involving public health, park closure, property protection (gross damage as from flooding or high winds), endangered species, critical actions for resource protection or dignitary protection.
- 2) Routine flights are flights that can be scheduled in advance. Their postponement will not result in any significant threat to life, property, park resources, or services, and an alternate flight at a later time can be scheduled if they are delayed or do not occur. Examples of routine flights include approved research, routine maintenance, trail projects, rehabilitation projects, management-prescribed fire operations, hauling in/out supplies, routine radio repeater maintenance, helicopter training, special use and filming permits, wildlife surveys, threatened and endangered species reintroduction, visitor use surveys, routine utility maintenance performed by utility companies, concession activities, VIP orientation, administrative uses, and contract work.

Given its special status as the only park to have a legislatively imposed ban on commercial tour overflights, routine flights and landings in wilderness will generally not be allowed. However, in those situations where strong and compelling needs exist, the Minimum Requirement Concept will apply and the completion of a Minimum Requirement Analysis Worksheet and Flight Request Form will be required. The flight will be granted only if it is determined to be the minimum tool to achieve the purposes of the area or for protection of wilderness values. In certain instances, the use of aircraft may be less of an impact to wilderness than an alternative method. In addition, other guidelines for aircraft use outlined in the Aviation Management Plan must also be followed. If the action can be conducted by a method that would have less overall impact to wilderness resources and character, it should be done in that manner. Non-routine flights should be conducted, as much and possible, in such a way to minimize the impact to wilderness resources and character.

2.1.4.2.2 Flight Requests. For any aircraft flight in the Park, a Flight Request Form (ROMO-47) must be completed and reviewed, except in emergency situations. Procedures for this are outlined in the Park's Aviation Management Plan. Briefly, the project leader will complete the Flight Request Form and forward it to the Park Aviation Officer and Wilderness Program Specialist for review. They will forward it, with comments and recommendations, to the Assistant Superintendent for review and approval/disapproval signature. The original will be returned to the project leader and a copy sent to the Aviation Officer and Wilderness Program Specialist for tracking purposes.

If the proposed flight is flying over or landing in wilderness, the completion of a Minimum Requirement Analysis Worksheet (ROMO-180) is also required and should be attached to the Flight Request Form. At times, aircraft may impact wilderness resources and character less than other alternatives, and therefore may be an effective tool for accomplishing park wilderness management objectives. However, the use of aircraft may adversely impact wildlife or the quality of the visitors' wilderness experience and must be carefully analyzed.

If the use of aircraft is determined to be the minimum requirement, the number of flights will be kept to the absolute minimum necessary to accomplish the action, and flight scheduling, routes, altitudes, etc. will be chosen to reduce wildlife disturbance and protect the quality of the visitors' wilderness experience. This pertains to both non-routine and routine flights.

2.1.4.2.3 Flight Scheduling. For actions where aircraft are determined to be the minimum requirement, flights are to be scheduled to minimize impacts to park users and resources. Things such as season of year, day of week, and time of day should be considered. Any proposed use of aircraft, except in emergency situations, on holidays and weekends between Memorial Day and June 30th or anytime between July 1st and Labor Day is highly discouraged. Proposals will require that a Minimum Requirement Analysis Worksheet be prepared and the action approved by the Assistant Superintendent. They may be approved if the action cannot be accomplished during the shoulder seasons due to snow conditions, project requirements or research timelines and if no other reasonable alternative exists.

2.1.4.2.4 Flight Paths. Flight paths will be proposed and documented on the Flight Request Form. They will be planned to mitigate the impact of aircraft presence and noise on wilderness resources and visitors and will be selected to avoid sensitive wildlife and wildlife habitat, especially during critical periods such as breeding and nesting. Whenever possible, flight paths will be selected that least impact visitors in Management Class 3 and 4 and do not pass directly over popular attractions, designated campsites, or travel along main trails. Aircraft will maintain a minimum of 500 feet above ground level (AGL), except during take-off, landing or special use missions (e.g., emergency operations, wildlife capture).

2.1.4.2.5 Landing Sites. Aircraft not under the direction of the NPS are not permitted to land in the Park. All aircraft landings require prior approval unless justified by an in-flight emergency. Landings should occur at sites identified in the Aviation Management Plan or approved by the Incident Commander during an emergency operation. Permanent cleared or constructed aircraft landing sites (e.g., heliports, helipads, or airstrips) are not permitted in the wilderness. Permanent site improvements or markings of any kind will not be permitted. Temporary sites (e.g., helispots) are to be located in natural openings on stable, durable surfaces such as dry, grassy meadows, rock or snow. Temporary improvements may only be authorized during emergency operations, when serious risk to human health and safety will result (search and rescue operations) or substantial resource damage is imminent (wildland fire suppression), if no

reasonable alternatives exist. Restoration to as near original condition as possible is required following the emergency.

2.1.4.2.6 Flight Documentation. The Aviation Coordinator and the Wilderness Program Specialist will track flight requests for routine flights, and actual flight information, for non-routine and routine flights. The Aviation Coordinator will prepare an annual aircraft use report. A copy of this report will be sent to the Wilderness Program Specialist for inclusion in the Annual State of the Backcountry/Wilderness Report.

Flight Request Forms are not required for non-routine flights. For routine flights, the original Flight Request Form will be returned to the person that requested the flight once the flight is approved or disapproved. Copies will be sent to the Aviation Officer and the Wilderness Program Specialist.

For both non-routine and routine flights, a copy of the OAS-23, Aircraft Use Report, will be sent to the Aviation Coordinator. This will include information on the actual flight period, flight area, flight hours, and other pertinent information about the flight. It will be the responsibility of the Helicopter/Aviation Manager to complete the OAS-23.

2.1.4.2.7 Monitoring of Aircraft Use. The administrative use of aircraft over and within wilderness will be monitored to determine aircraft use trends and impacts to the wilderness resource and visitors' wilderness experience. The aircraft use report will be reviewed annually to determine if additional guidelines are necessary to further minimize aircraft use and impacts in wilderness.

2.1.4.3 Emergency Services

NPS Management Policies provide overall guidance to evaluate the urgency of emergency incidents and to allocate available resources. Operational procedures are directed through the Park's Emergency Operations Plan (updated annually), Aviation Management Plan, and Fire Management Plan.

During emergency incidents, consideration will be given to protecting the Park's backcountry/wilderness natural and cultural resources. While hazard mitigation may be required, under no circumstances will pure convenience dictate the destruction of any park resource. Leave No Trace minimum impact techniques will be incorporated into incident action plans and used whenever possible to lessen impacts to backcountry/wilderness resources during emergency operations.

NPS Management Policies provide for the administrative use of motorized equipment or mechanical transport, including motorboats and aircraft, "...in emergency situations involving human health and safety." For the purposes of this plan, "emergency situations" include:

- Responses to those in need of medical or physical assistance when threats to human health and safety are reasonably assumed,
- Responses to those who are determined to be unjustifiably overdue and threats to human health and safety are reasonably assumed,
- Any response to downed aircraft,
- Any response to an "unknown emergency" (e.g., mirror flash, second-hand visitor report, radio distress signal, etc.)
- Any reported disaster,

- Special law enforcement operations when threats to human health and safety are reasonably assumed and
- Responses to wildland fires which threaten life, property, cultural or natural resources.

Refer to Section 2.1.4.2 Aircraft Use, Emergency Operations Plan and the Aviation Management plan for guidelines.

2.1.4.4 Backcountry Permit and Reservation System

The Backcountry Permit and Reservation System is an integral component of mitigating impacts caused by overnight use. Overnight use causes impacts; however, since RMNP instituted the permit and reservation system, most impacts have been kept to a minimum. The combination of managing where and how visitors camp, and providing face to face information on how to minimize impacts, has improved the overall condition of the wilderness resource from what it once was. The Backcountry Permit and Reservation System is the responsibility of the Division of Visitor Management and Resource Protection.

2.1.4.4.1 The Permit System. A backcountry permit (Appendix E) is required year round for all overnight trips into the backcountry. One permit is required per party per trip. Due to the popularity of Rocky Mountain National Park's backcountry, individuals are allowed to obtain a permit for up to 7 nights, June through September, and an additional 14 nights October through May, for a total of 21 nights within a calendar year. Reserved permits not picked up by 10:00 AM the first day of the trip (from May through October) will be canceled in entirety, so that camping opportunities may be offered to other campers.

An administrative fee is collected from May through October. The fee is non-refundable, non-exchangeable, and does not include the park entrance fee. There is no administrative fee from November through April.

Permits are issued year-round on the east side of the Park at the Backcountry Office located near the Headquarters/Beaver Meadows Visitor Center and on the west side of the Park at the Kawuneeche Visitor Center Backcountry Office. In the summer, permits are also issued at the Wild Basin Ranger Station, Long's Peak Ranger Station, Corral Creek Ranger Station, and Colorado State University's Pingree Park Campus. In the winter, self-registration permits may be picked up at self registration boxes located at the Beaver Meadows entrance station, Fall River entrance station, and at Wild Basin, Sandbeach, Longs Peak, and Dunraven trailheads.

While hiking to camp, the permit should be attached to the outside of the pack. Once at camp, the permit should be securely attached to the tent. The permit should be reattached to the pack for the hike out.

A vehicle dash tag is issued for each vehicle that will be parked at the trailhead overnight. It authorizes the vehicle to be parked at a specific trailhead. The dash tag lists the person's last name, the license number of the vehicle, the trailhead at which the vehicle will be parked and the date, in code, that the party will be exiting the backcountry. The date is written in code to inhibit car clouting (break-ins). This date is written in order to inform Rangers how long this vehicle should be parked at a given trailhead. It assists Rangers when a party is reported overdue to see if the party may still be in the backcountry and so that search and rescue operations may begin.

The permit system was put in place to reduce impacts and to disperse use. To accomplish this, there are five types of camping permitted in the backcountry that provide a range of opportunities and experience for the visitor. Standards for the five types are:

Type 1 - Designated Sites: Individual and Group (Figure 2-2):

- Within Management Class 3 only (except Little Rock Lake, Moore Park, Rabbit Ears, Peregrine, Cub Lake, Arch Rocks, Mill Creek Basin and Upper Mill Creek).
- Camp must be established within 15' of the metal arrowhead and post that marks the site.
- Camp stoves only. Fires prohibited, except in sites specified for wood fires with visible metal fire ring (dead and down wood use only).
- Party size is limited to 7 at individual sites and 12 at group sites.
- Due to excessive impact, groups over 7 persons must use group sites or split up and camp in camp areas at least one mile apart.
- If the designated site has more than 4" of snow, follow the "Winter Areas" standards.

Type 2 - Stock Sites: Individual and Group (Figure 2-2):

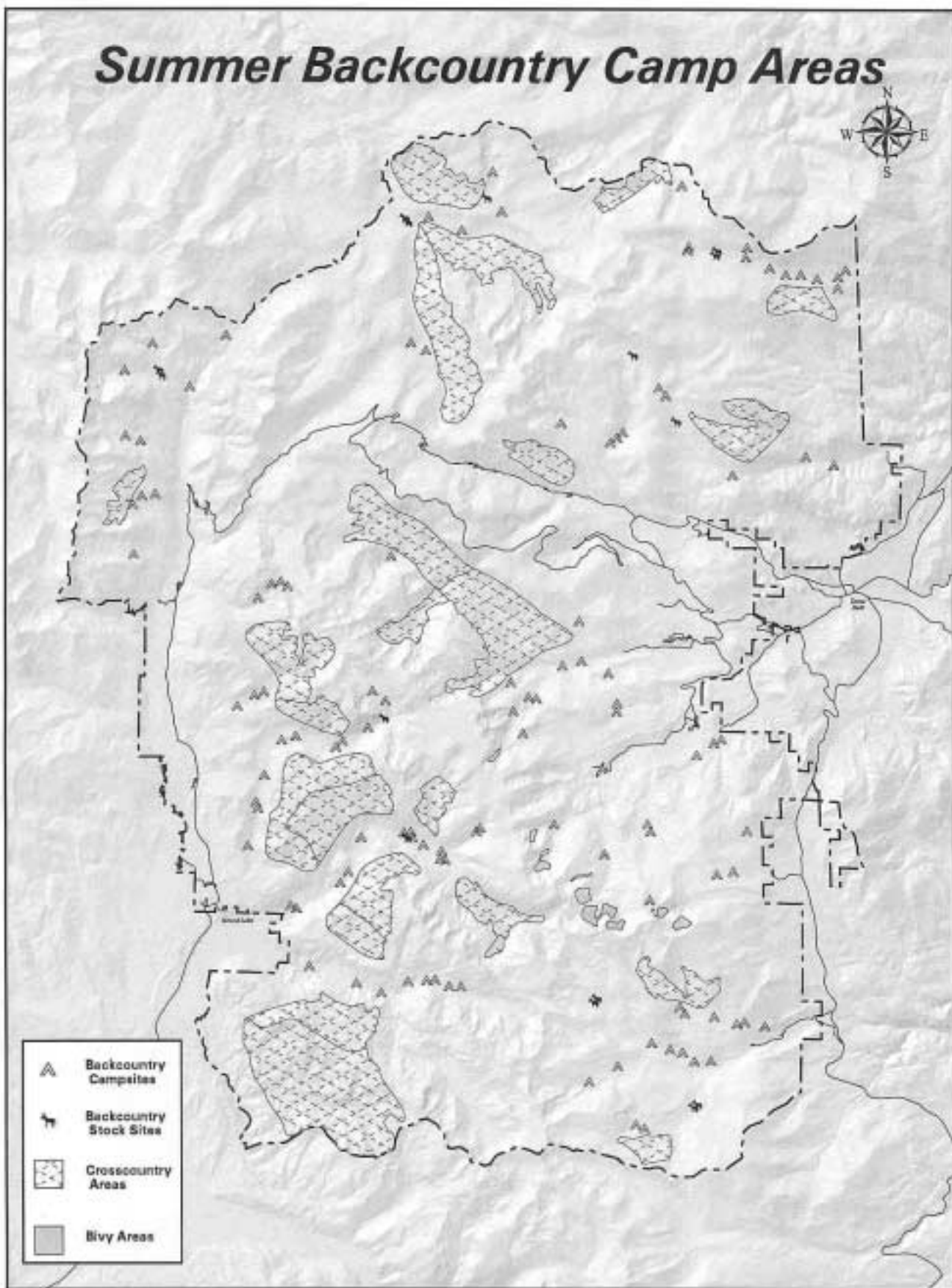
- Within Management Class 3 only.
- Camp must be established in "stock camps" only.
- Party size is limited to 6 people and 8 stock at individual stock sites (allowing for 1 pack stock per 3 people and saddle stock).
- Party size is limited to 12 people and 16 stock at group stock sites (allowing for 1 pack stock per 3 people and saddle stock).
- Camp stoves only. Fires prohibited, except in sites specified for wood fires with visible metal fire ring (dead and down wood use only).
- Grazing is prohibited. Certified weed-free feed is required.
- Use hitchrails that are provided. Highlining, hobbling and loose herding is prohibited.

Type 3 - Crosscountry Areas (Figure 2-2):

- Within Management Class 2 only
- Camp must be. . .
 - Established within the designated crosscountry area.
 - At least 200' (70 adult steps) from water.
 - Out of sight and sound of trails and other campers.
 - Below treeline and out of meadows.
 - Moved at least 1 mile each night.
- No more than 2 nights in 1 crosscountry area.
- Party size is limited to 7 people.
- Camp stoves only. Fires prohibited.
- Stock prohibited.

Type 4 - Bivouac Areas (Figure 2-2):

- Within Management Class 2 only
- A bivouac is defined as a temporary, open-air encampment.
- Permits are issued only to technical climbers.

**Figure 2-2**

- The climb must be 4 or more technical pitches and 3½ or more miles from the trailhead.
- Party size is limited to 4 people and all members must be climbing.
- A bivouac must be established. . .
 - Within the designated bivouac area, or at the base or on the face of the climb.
 - At least 200' (70 adult steps) from water.
 - With camp set up at dusk and taken down before dawn.
 - Without the use of erected type shelters, tents or supported tarps.
 - On rock or snow only, not on vegetation, and out of meadows.
- Camp stoves only. Fires prohibited.
- Stock prohibited.

Type 5 - Winter Areas (Figure 2-3):

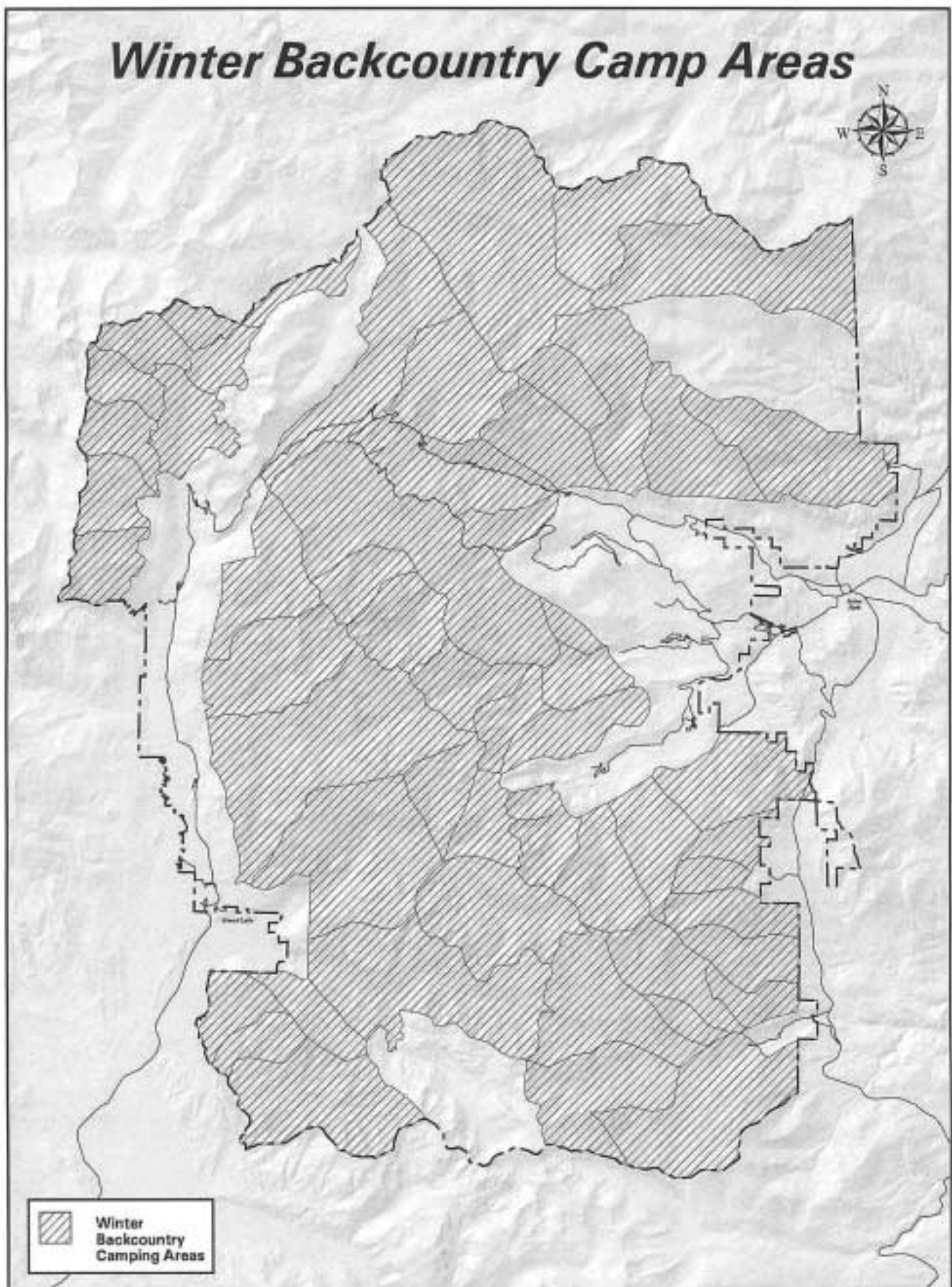
- Within Management Classes 1, 2 and 3 only where designated.
- If a designated site in the area has more than 4" of snow, camp at least 200' (70 adult steps) away from the site. Do not camp in the site.
- Party size is limited to 12 people.
- Camps must be established. . .
 - Within the designated winter area.
 - At least one mile from the trailhead.
 - At least 200' (70 adult steps) away from water.
 - On snow or rock only -- never on vegetation or in meadows.
 - Out of sight and sound of other campers, trails or winter travel routes.
- Camp stoves only. Fires prohibited.

Within the backcountry permit system, on any given night in the summer, a total of 1,973 people could be camping in the backcountry. In the winter that number increases to 2,484. A breakdown of camp areas, by type, can be found in Appendix C, Table 1. To date, with the exception of a few holiday weekends, there is always an opportunity for someone to secure a permit for the type of camping experience they desire.

2.1.4.4.2 The Reservation System. In order for visitors to plan trips in advance, a reservation system has been established. All camp areas are open to reservations, though the greatest demand is in the summer. Commercial and private parties follow the same reservation schedule. Reservations can only be made for the current calendar year. Confirmation letters will be mailed for the reservation. Permits must be picked up in person, but not more than 30 days before the trip.

The following is current the annual reservation schedule. These dates are subject to change in the future if determined to better meet visitor needs and management objectives.

- January 1 through February 28 - Reservations by phone, mail, or walk-in (for January and February reservations only)
- March 1 through May 15 - Reservations by phone, mail, or walk-in
- May 16 through September 30 - Reservations by mail or walk-in only
- October 1 through December 31 - Reservations by phone, mail, or walk-in

**Figure 2-3**

2.1.4.5 Camp Area and Site Management

As outlined by the Section 2.1.4.4, Backcountry Permit and Reservation System, there are five types of backcountry camping in the Park. It is recognized that with use come impacts. It is incumbent upon the Park to manage camping areas and sites in a way to mitigate associated impacts. Each class of camping requires different types of management techniques to ensure minimum impacts to the wilderness resource.

A main concern of backcountry management is impact to the resource. In most respects this should take precedence over visitor desires, which can be more instantly manipulated and satisfied than can be the restoration of a heavily impacted area. A delicate marsh heavily impacted may take hundreds of years to restore itself, when it might have taken only a short season to heavily impact it from misuse by the visitor. Other types of backcountry impacts could be the change in wildlife migration routes, human intrusion into a rare bird nesting site or the major destruction of a small meadow by an ill-placed campsite.

Therefore, managers need to consider ways to prevent further erosion, site spread, vegetation destruction, and other impacts to areas used for trailside camps and the creation of sites in crosscountry and bivouac areas. Primarily this will be done to protect and preserve the resource, but it may have a secondary benefit of upgrading a designated campsite to the point that it makes it more "campable" (e.g., flat tent pad, no roots, or rocks which would preclude pitching a tent, etc.)

Any new management action, pertaining to camp areas/sites (e.g., addition of a tent pad, privy), requires the completion of a Backcountry Camp Area/Site Proposal (ROMO-168) that will be submitted to the Wilderness Program Specialist for review. Depending on the scope of the action, it may also require a Project Proposal/Clearance review and/or a Minimum Requirement Analysis (ROMO-180).

2.1.4.5.1 Improvements. In order to minimize impacts in and around camp areas, some improvements are necessary at designated individual, group, and stock camp areas. Improvements will not be provided in crosscountry, bivouac or winter camping areas, as specific camp spots are not desired or designated.

Improvements can include tent pads, privies, metal fire grates, hitchrails and posts and food storage devices. Picnic tables will not be provided and the construction of "camp furniture" will not be allowed; any that appears will be dismantled.

2.1.4.5.2 Designated Camp Area/Sites. The use of the camp area/sites is managed under the Backcountry Permit System (Section 2.1.4.4). Designated camp area/sites receive the most use and require the most management action and maintenance. Management actions should be limited to the least amount necessary to maximize resource protection, while providing a safe, campable area. Each camp area will be evaluated on an individual basis as to what management actions should take place within established guidelines.

Designated (individual and group) camp areas will only be allowed within Management Class 3, except for Little Rock Lake, Moore Park, Rabbit Ears, Peregrine, Cub Lake, Arch Rocks, Mill Creek Basin and Upper Mill Creek. Camp areas should be at least a half-mile apart. Each camp area will have from one to a maximum of six campsites. Campsites within the camp area should be out of sight and sound of each other as much as possible. An eight inch tall, silver metal arrowhead and post will mark each campsite. Campers must camp within 15 feet of the

arrowhead or on established tent pads. Each individual campsite in a camp area will not exceed 800 square feet of bare ground in the core area. Each group campsite will not exceed 1200 square feet. Exceptions to standards for bare ground square footage may occasionally be granted through Project Proposal/Clearance review, if wilderness resources will be better protected by a larger size site.

There will be no net gain in the number of designated camp areas. If a designated camp area or site is lost to natural processes it may be re-established. If a designated camp area or site does not meet established standards (e.g., within 200 feet of water) or if there is another environmentally preferred location, it may be relocated, unless the relocation would cause a greater overall impact to the area. Relocations will be evaluated on an individual basis. A camp area or site may be relocated if it is necessary for natural and cultural resource protection or for the enhancement of the wilderness experience. A Project Proposal/Clearance review and a Minimum Requirement Analysis are required.

New campsites at existing camp areas may be allowed. The type of a campsite may be converted to another type (e.g., wood fire site to no wood fire site, individual site to a group site). These actions be closely analyzed and will primarily occur to protect resources and mitigate impacts, not necessarily for the convenience of the user. A Project Proposal/Clearance review and a Minimum Requirement Analysis are required or adding, permanently closing, converting or moving a designated campsite.

Access trails. Access trails are defined as those trails that are designated and wanted. Access trails in and around camp areas should conform to trail standard level E or F (see Section 2.1.4.7.2). They include trails from the main trail, to water, to the privy, food storage area, other campsites and/or a scenic spot. Access trails to the camp area and sites will be identified along the main trail with a standard wooden camp area sign indicating the camp area name. All access trails in and around the camp area should be easily followed to prevent trail braiding and social trailing.

Access trails from the main trail to campsites will be marked with four inch plastic red arrowhead markers. These red arrowheads are not to be used to mark trails to water sources, as it could invite confusion and illegal satellite campsites to form. Tree blazes, cairns, flagging, or other non-natural markings are not to be used to mark any access trails. If needed to delineate trail tread, access trails may be lined with rocks or logs.

Trails to water sources should be laid out so they maintain the least gradient, minimize erosion problems, avoid difficult rocky areas, will cause the least damage to building and maintaining the trail tread. Current trail management techniques outlined in the Trails Management Plan should be followed. The trail should cause minimum damage, and cause no damage to the stream or water source.

Social Trails. Social trails are defined as those trails that are non-designated and undesirable. They are trails made by people short cutting to other campsites, water sources etc. They generally cause resource impacts such as soil erosion and vegetation damage. All attempts should be made to obliterate and rehabilitate any social trails in and around camp areas to prevent resource impacts and management problems.

Tent Pads. It has been shown through studies that the damage to the vegetation, erosion, etc will occur in a very short period of time even with minimum concentrated use (Wilderness Management, Hendee, Stankey, Lucas, USDA, NPS). Thus, hardening an area for tents or

construction of a tent pad may be necessary and allowed at some campsites. Each campsite should be evaluated individually to determine if a hardened area or tent pad is needed to prevent damage to vegetation, erosion, unwanted site spread and/or other resource impacts.

Each individual campsite should accommodate space for three tents. This may mean up to three hardened spaces or constructed tent pads to accommodate a group size of seven. Group campsites should be able to accommodate a group size of twelve. This may mean up to six hardened spaces or constructed tent pads. Each tent pad may be 100 square feet. If approved, tent pads may be combined to create a larger pad with overall size not exceeding the total size allowed for the number of pads.

In some cases, identifying and delineating a tent site/pad could be done by merely cleaning away forest debris, such as fallen limbs and twigs. Repeated, frequent use will keep the site clean and easily recognizable. If, however, site spread is occurring or has occurred, it may be necessary to further identify the site. Logs or rocks may be placed around the site; however, a problem with this method is that the logs are used for firewood and the rocks are used to line a fire ring. To prevent this, use large logs or rocks and bury the logs and rocks using the "iceberg technique" where a major part of the rock is buried with only a small, uninviting part of the rock left protruding above the ground. Whenever possible, materials used to harden a campsite, or access trail, should conform to trail construction standards.

Tent pads may consist of one to several cribbing logs to identify the area. They should blend in with surroundings. The cribbed area may or may not need fill material. If fill is needed it may be packed in or obtained locally, depending on the amount needed. If a borrow pit is necessary, the pit must be well out of the area, kept small in size, and be covered with forest debris to avoid visual unsightliness. Refer to Section 2.1.4.7.3 regarding borrow pit standards.

2.1.4.5.3 Stock Campsites. Users with horse, llama, burros, mules, and ponies can use all stock campsites, with the exception of Aspen Knoll, Ute Meadow, and Haynack, which are designated for llama use only. Campsite hardening, access trails, and site campability standards for stock campsites will be the same as for individual and group campsites. Each stock campsite in a camp area will not exceed 2,000 square feet of bare ground in the core area including the hitchrail area.

Hitchrails will be provided at or near each stock site to accommodate the appropriate number of stock (8 at individual stock camps and 16 at group stock camps) and will be used to confine stock overnight. Hitch posts, to accommodate 5 llama, will be provided at the llama-only campsites. Highlining, hobbling, loose herding, temporary corrals or other means of confinement are not allowed. Stock users are expected to clean up after their stock. This includes packing out any uneaten feed, spreading manure, and filling in any holes caused by pawing.

2.1.4.5.4 Crosscountry and Bivouac Areas. Crosscountry and Bivouac camping will only be allowed in designated areas in Management Class 2. Leave No Trace minimum camping techniques will be emphasized. A goal for crosscountry and bivouac areas is that camping is non-discernable. Since it only takes a few uses for impacts to occur, camping in crosscountry areas is limited to 1 night per camp spot and 2 nights per crosscountry area. Other criteria for crosscountry and bivouac areas are listed in Section 2.1.4.4.1. When impacts are discovered, they will be mitigated as soon as possible. Any improvements to camp spots, such as rock walls for wind breaks, will not be allowed and will be dismantled if found. It may be necessary to close an impacted spot to keep it from becoming highly impacted and allow it time to recover.

2.1.4.5.5 Winter Areas. Winter camping areas are allowed only in designated areas in Management Class 1, 2 and 3. Criteria and regulations on winter camping can be found in Section 2.1.4.4.2. Winter Leave No Trace minimum camping techniques will be emphasized. If any impacts from winter camping are found they will be mitigated as soon as possible. Construction of snow shelters (e.g., snow caves, igloos, pits etc.) is allowed; however, they should be destroyed upon leaving the area.

2.1.4.5.6 Monitoring. Camp area and site monitoring is imperative to proper management. The Backcountry Campsite Impact Assessment and Monitoring System (BCIAMS) was designed in 1988 and implemented in 1989 (Connor, 2000). The system was reviewed, and modifications made, in 1992, 1995, and 1998 (Devine, et. al., 2000). All campsites, crosscountry areas, and bivouac areas were inventoried and monitored each year from 1989-1991. In 1992 a rotational system was established, and each area/site is inventoried and monitored once every three years. BCIAMS will continue to be conducted as a way to assess impacts and guide the management of camp areas and sites.

Designated sites and rated in eight categories: vegetation/ground condition, tree/shrub damage, root exposure, social trails, access trail tread condition, illegal satellite sites, cleanliness and barren core camp area. Each campsite receives an impact rating score. The impact rating score range is from 0 to 24. The higher the score, the greater the impact. It is desirable that each campsite have a impact rating of no more than 12. Each District will prioritize campsites to be rehabilitated based on the BCIAMS impact rating and other management considerations.

Crosscountry and Bivouac areas are inventoried to see if impacts from repeated camping in an area is occurring. If impacts are found, they are rated on overall condition, distance to water, any illegal fire scars, social trails and any other impacts. Overall condition ratings range from 1 to 3. A rating of 1 is acceptable. If a site receives a rating of 2 or 3, rehabilitation work will be conducted to mitigate the impacts and restore the site to natural conditions.

2.1.4.6 Climbing Management

National Park Service policies recognize climbing as a legitimate recreational activity within national parks, including wilderness. Climbing has been a popular activity in and around the area known today as Rocky Mountain National Park since the 1800's. The wide variety of peaks and granite rock formations in the Park provide excellent opportunities for a wide spectrum of climbing including rock, big wall, snow and ice, bouldering and mountaineering. It is a mecca for local climbers, as well as those from around the world. Opportunities for climbing exist in all management classes.

With the advent of sport climbing in the United States, this recreational pursuit has increased significantly in recent years. As the attractiveness of the sport continues to grow, it becomes necessary to balance this recreational activity with responsible management of the Park's resources. In balancing preservation versus use, the objective is to allow climbing to continue as freely as possible, while minimizing impacts on environmental resources and other park visitors. Respect for the environment and a commitment to Leave No Trace climbing techniques are required of the climbing community to maintain a mutually beneficial partnership.

With its long history of climbing activity, RMNP and the surrounding area has long been known for a strong traditional climbing ethic and concern for the resource by its users. The local climbing community does not accept practices such as placing bolts on existing routes or establishing new bolt-intensive routes and chipping or gluing new holds. Clean-climbing

techniques are generally the norm. It is incumbent on the local climbing community, along with the Park, to inform and educate climbers new to the area of this fact for the ultimate protection and maintained access to climbing areas.

Many impacts (e.g., soil compaction and erosion, wildlife disturbance, noise) that are often related to climbing activities are also associated with other forms of recreation (e.g., fishing, backpacking, day hiking) while other impacts are directly related to climbing (use of chalk, fixed anchors). It is the intent of this section to focus on the impacts directly related to climbing and when necessary general impacts at specific climbing areas. Climbing bivouacs are covered in Section 2.1.4.4 Backcountry Permit and Reservation System.

Littering/Human Waste.

Non-degradable litter is common in all areas of visitation. Litter as it relates to climbing, is deposited by climbers, climbing spectators and at bivouac (bivy) sites. Athletic tape is sometimes found at the base of crack climbs due to its loss of adhesion. Ledges and the base of cliffs have been found to have fecal matter scattered around. Some bivy sites pose a problem, since waste cannot be buried. Decomposition of waste is a problem at high elevations due to cold temperatures. Exposed waste pose health problems to other climbers or wildlife and aesthetically degrades the user experience.

Climbers should clean up after themselves and pack out trash and garbage. Climbers will be encouraged to pack out human waste when in an area where cat holes or other appropriate means of human waste disposal (e.g., privies, smear technique in sun-exposed areas away from drainages and travel routes) are not available or appropriate.

Erosion.

Off the rock - climbers and mountaineers often bushwhack and scramble to gain access to the base of the cliff. Numerous steep approach trails have resulted. These access trails typically are braided with other trails to the same climb. Because they travel straight up the grade, water is diverted onto the trails, causing soil loss, trenching and loss of vegetation. At the base of climbs in high use areas (e.g., Lumpy Ridge), the ground is typically compacted and denuded of vegetation. Social trails often contour along the base of the rock formation to the start of other climbs.

Access trails to the base of well-known and heavily used climbing routes will be identified, delineated, hardened and maintained in order to prevent further erosion problems, loss of vegetation and to establish a pattern of use. In certain instances, signs may be placed to direct climbers away from problem or sensitive areas in order to protect resources. Social trails that have developed over long periods of time, but currently see infrequent use, will be rehabilitated to discourage future travel. Travel in high use areas (e.g., Lumpy Ridge, Management Class 4) will be on established access trails and corridors. Dispersed travel to the base of climbs will be encouraged in climbing areas where access trails are not provided.

On the rock - through continuous use, the rock surface becomes smoother and freer of lichens, moss and dirt. Ledges and cracks also loose dirt and vegetation from climbing traffic. Toe and finger holds become worn off, or are not in a useful location for some climbers. To make a climbing route more accommodating, a few climbers alter routes by gluing on artificial holds or they may chip or pry the rock to create or improve holds.

The gluing and chipping of holds will not be allowed. Aggressive, intentional "gardening" or cleaning the rock of soil and vegetation will not be allowed.

Social Impacts.

While climbing is widely accepted within RMNP, the activity has not previously been addressed through an approved policy or regulation. Under the Code of Federal Regulations, various aspects of climbing recreation are managed in order to protect park resources. Individually, climbers come from a broad spectrum of backgrounds with equally broad sets of values and ethics. This has occasionally led to conflicts among users. In many instances, climber-agency relations have suffered due to imposed regulations and/or restrictions to climbing or access. The climbing community and park staff will continue to work together to mitigate user conflicts.

Noise.

Climbers frequently utilize vocal signals to communicate specific needs during a climb to facilitate safe ascent or descent. Such noise can disrupt wildlife or impact hikers adjacent to climbing areas. Other noises (e.g., rock hammers) are also considered intrusive in the wilderness setting.

Climbers will be encouraged to be sensitive to the value of natural quiet. Rock hammers must be used judiciously during sensitive times for wildlife (e.g., breeding, nesting) and in areas where other visitors may be disturbed.

Wildlife.

Many of the popular climbing areas in the Park are also prime habitat for some species of wildlife. Birds of prey frequently nest on rocks along and adjacent to established climbing routes. Concerns exist for both birds and climber safety.

The spring raptor area closures program has been a very successful means to reduce impacts. This program will continue. Temporary closures will be used to protect nesting raptors during critical phases of the courtship, nesting, and fledging periods. Prophylactic closures will occur in early spring of areas historically used by raptors. Raptor activity will be monitored and those areas or routes with current raptor use will be closed. Other areas where activity is discovered will also be closed. Closures will be in effect long enough to ensure protection and non-disturbance of the birds. Temporary closures may be effected for other wildlife protection as necessary.

Visual Impacts/Chalk.

Visual impacts associated with climbing vary depending on the viewer's attitude towards climbing in general and their proximity to the activity. Bright colored slings, shiny metal bolts, white chalk and the sight of climbers and ropes on an otherwise undisturbed formation can be viewed as intrusive. The use of chalk may also cause a change in pH when it comes in contact with lichens, inhibiting growth or destroying the plant.

Climbers will be encouraged to wear clothing and use protection, slings, and other equipment that blend in with the natural surroundings. The use of chalk will be allowed, however climbers will be encouraged to be sensitive to visual and environmental impacts that could occur.

Hardware/Equipment.

A wide range of equipment and hardware has been developed over time to be used as protection for the climber. Hammer driven pitons which widened and scarred cracks have been generally replaced by removable devices, assisting in "clean climbing" practices. However, the exploration of steeper, more difficult face climbing has led to an increase in the placement of fixed, artificial protection (e.g., bolts) by some climbers.

The use of removable and fixed anchors, as well as other climbing equipment, is appropriate in wilderness. However, fixed anchors must be placed judiciously and closely managed in order to prevent the degradation of wilderness resources and character. Where anchor points are necessary for climber safety, the use of removable equipment is desired and highly recommended. Fixed anchors should not be placed merely for convenience or to make an otherwise "unclimbable" route climbable.

Fixed anchors (e.g., webbing, bolts, pitons, chains) currently in place may remain. They may be replaced, or removed, by individual climbers, during a climb, or the NPS, during park operations. Safety remains a responsibility of the climber. The NPS will not, as policy or practice, monitor fixed anchors to evaluate their condition or accept any responsibility for fixed anchors.

The placement of new fixed anchors may be allowed when necessary to enable a safe rappel when no other means of descent is possible, to enable emergency retreat, during self rescue situations. The infrequent placement of new fixed anchors is allowed when ascending a route to connect terrain that is otherwise protected by removable anchors (e.g., one crack system or other natural feature to another) or when there are no features which will accommodate removable equipment but the occasional placement of a fixed anchor may provide a modicum of safety during the ascent (e.g., traditional face climbing). New, bolt intensive climbing routes (e.g., sport climbs, bolt ladders) are not appropriate in wilderness and should not be created. The Park may place and maintain fixed anchors for administrative and emergency purposes.

When a climber determines the need for anchor placement or replacement, this must be accomplished in compliance with regulated and permitted standards (e.g., power drills prohibited). At this time there is no permit or approval system in place, or proposed, with regard to the placement of fixed anchors; however, one may be developed and implemented if the Park determines it is necessary, through research and monitoring, to protect natural and cultural resources.

Patrol, Education and Enforcement program.

Without a visible patrol and education/enforcement program, educational efforts, policies and regulations will have minimal effect. An important aspect of the patrol function is the incorporation of education, research, monitoring and impact mitigation. Park patrols are predicated on the commitment to protect the resource, educate visitors, guard against illegal activities, provide necessary assistance and perform search and rescue functions in cases of emergency incidents. Patrols will focus primarily on 1) the education of visitors as to resource impact issues, minimum impact techniques and preventative search and rescue and 2) the enforcement of applicable laws and regulations when necessary and appropriate.

The Park will conduct a strong educational effort promoting minimum impact techniques and sound climbing ethics as outlined in the Conscious Climbing brochure and Leave No Trace Outdoor Skills and Ethics: Rock Climbing booklet. In essence, climbers will be encouraged to:

- Use colors that blend in with natural environment of the area
- Pack out all litter
- Use existing trails to approach climbs
- Know and respect environmentally sensitive areas (Raptor closures)
- Know and abide by all regulations
- Avoid placing permanent protection
- Be considerate of wildlife and other users

The Park will conduct preventative search and rescue programs proactively and upon request for local and regional groups and organizations.

As enforcement measures become necessary, the patrol staff will enforce applicable regulations (e.g., no power drills for bolt placement, no pets in the backcountry/wilderness, illegal guiding activities, violation of raptor closures, illegal camping and bivying, resource degradation for the purpose of enhancing a climbing route). The following regulations guide park management of climbing activities:

Title 36 CFR 2.1 Preservation of natural, cultural and archeological resources

Prohibits practices of possessing, destroying, injuring, defacing, removing, digging or disturbing (chipping, gluing or gardening) from its natural state any park features.

Title 36 CFR 2.2 (a)(2) Wildlife Protection

Prohibits feeding, touching, teasing, frightening or intentional disturbing of wildlife nesting, breeding or other activities.

Title 36 CFR 2.12 Audio Disturbances

Prohibits the practice of utilizing motorized equipment or machinery which creates unreasonable noise, particularly in undeveloped areas (motorized rock drills).

Title 36 CFR 1.5 (f) Closures and Public Use Limits

Temporary closures of specific climbing routes and areas will be enforced to insure prudent management of raptor nesting areas where they coincide with popular climbing routes.

Climbing is a “high risk” sport, and climbers are solely responsible for their own safety. While the National Park Service has the authority to provide search and rescue services to climbers in need of assistance, there is no legal requirement to do so. All rescue activities will be managed to provide necessary treatment to the sick and injured, keeping in mind “light on the land” and Leave No Trace rescue actions.

Research and Monitoring.

The last inventory of fixed anchors was completed in 1990. A current inventory will be conducted and updated at least every three years. The Park will develop and maintain an inventory and monitoring program to gather essential information on how climbing activities affects natural, cultural and ecological resources.

2.1.4.7 Trails Management

Two park goals are to provide visitor access to the park resources to a degree that enables the visitor to understand and appreciate the process they reflect, and to provide the opportunity to fully sample the various geographic regions, geological features and ecological attributes. Trails are the primary minimum impact tool used to achieve these goals of access to the backcountry/wilderness.

The objective is to provide a wide range of experiences with a certain level of expected trail conditions. Safety, resource compatibility, prevention of environmental degradation, and to certain extent, ease of travel, are all considerations for trail management.

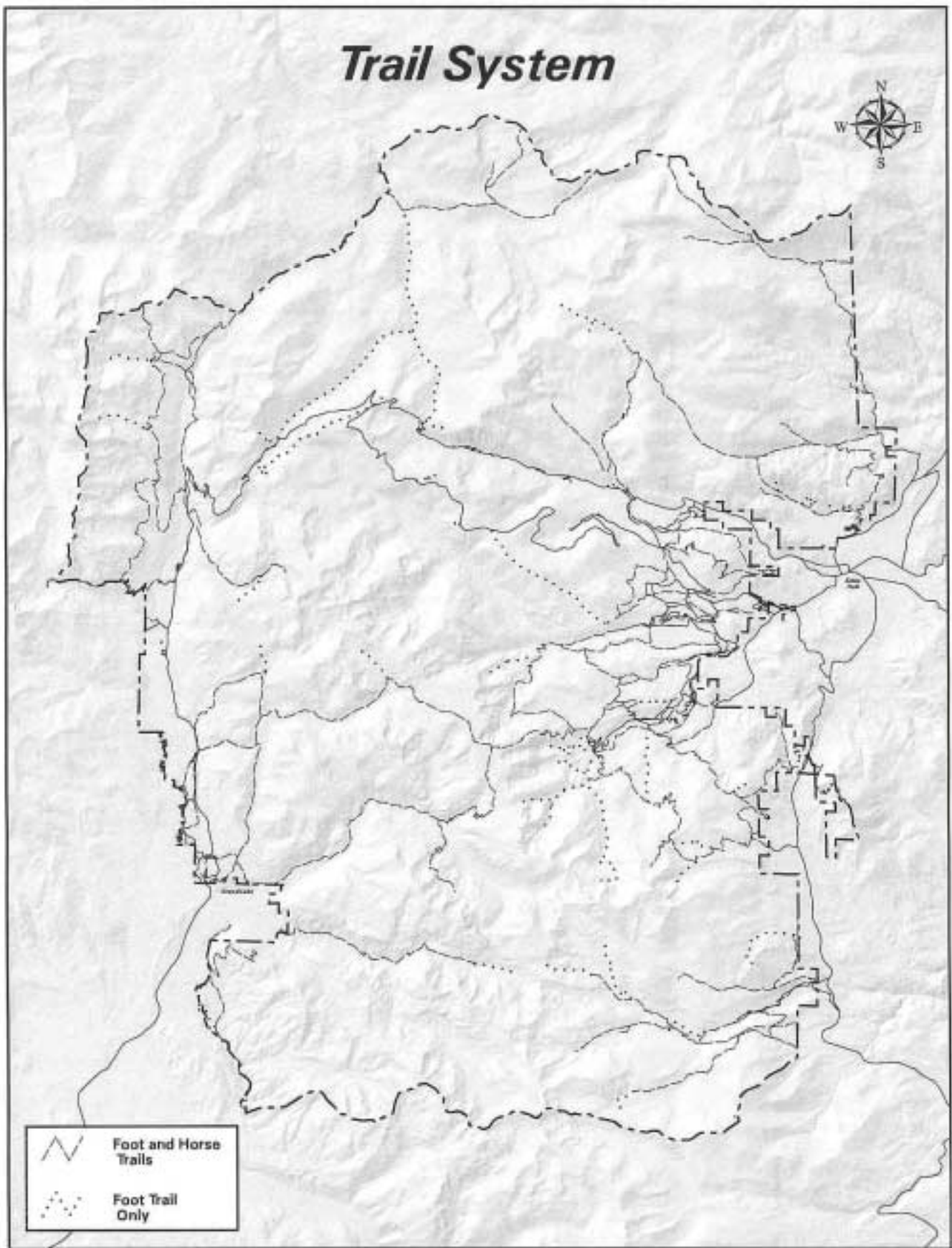


Figure 2-4

Trails are widely recognized as being consistent with wilderness. Controversy can center on the appropriateness of trail type. Research indicates that wilderness visitors favor low standard trails (somewhat like a game trail – narrow, varying grade, winding, not the shortest route) more than high-standard trails (wide, steady grades, fairly straight).

Trails serve to contain and consolidate wilderness use. Most recreational use occurs along the maintained and designated trail system (see Figure 2-4). The current trail system evolved from game trails used by the Native Americans, then explorers and herders, and finally adopted by the National Park Service, which now maintains over 350 miles of trail in the RMNP backcountry/wilderness. These trails are divided into different categories, based on intended use, with specific standards of maintenance, which are identified in the Park's Trail Plan (May 1982).

2.1.4.7.1 Criteria for Establishing Trail Standards. Trail management goals are to maintain existing trails at desired standards, with the possibility of upgrading some sections in the lower categories of maintenance. Current management goals do not call for additional trail segments to be designed and added to the maintained inventory either by new construction or formalizing increasingly popular routes (except in the recently acquired Lily Lake area), since the existed trail system provides a sufficient system to distribute use and allow visitors to experience park values.

In the 1982 Trail Plan, RMNP adopted specific trail standards based on the following criteria:

- Natural Resource Protection
- Cultural Resource Protection and Stabilization
- Management Zone Classification: Trail Character and Visitor Experience
- Recreational Use Type and Level
- Visitor Safety

Regarding visitor safety, NPS Management Policies (6:8), state that park visitors must accept wilderness largely on its own terms, without modern facilities provided for their comfort or convenience. Users must also accept certain risks, including possible dangers arising from wildlife, weather conditions, physical features, and other natural phenomena, that are inherent in the various elements and conditions that comprise a wilderness experience and primitive methods of travel.

2.1.4.7.2 Trail Standards. There are over 350 miles of maintained trails in the trail system at RMNP. The Trail System Maintenance and Reconstruction Plan 2000 details the complete list of trails, classification by trail standard and maintenance details, and trail mileage. A summary of this is found in Appendix C, Tables 6a and 6b of this plan.

There are six trail maintenance levels established by the 1982 Trail Plan and the Trail System Maintenance and Reconstruction Plan 2000 as follows:

Standard A. Very high “frontcountry” standard designed for large numbers of pedestrians, including disabled persons. Examples are Lily Lake, Sprague Lake, Coyote Valley, Bear Lake.

Standard B. High-standard pedestrian trail designed for minimum maintenance, despite heavy use. Examples are Alberta Falls, Calypso Cascades, Huffer's Hill (AVC), Toll Memorial, Adams Falls, etc.

Standard C. High-standard trail designed to withstand the impacts of large volumes of commercial horse use. Examples are Moraine Park, Glacier Creek, Aspenglen, Lower Tonahutu.

Standard D. High-standard trail carefully designed and aligned for minimum maintenance: intermediate horse and hiker volumes, requiring construction and clear delineation of the treadway throughout. Examples are the Continental Divide Trail -- North Inlet & Tonahutu, Flattop, East Inlet, Thunder Lake, Longs Peak.

Standard E. Typically a non-constructed trail that has evolved informally through use; may have been partly reconstructed at a higher standard; private horse traffic possible, although difficult in some places. Examples are North Fork, Black Canyon.

Standard F. A non-constructed, foot only trail that has evolved informally through use; unsafe or unsuitable for use by horses because of very boggy or steep, rocky areas, or for environmental protection; some may not be regarded as part of the official park trail system and may not appear on park maps (examples are paths leading from higher standard trails into crosscountry areas, climbers' access trails, and spur trails to most backcountry campsites); constructed structures minimal. Examples are Boulder-Grand Pass, Mt. Ida, Chiquita Pass - Mt. Ypsilon, climber's trails on Lumpy Ridge.

Standard A trails are not appropriate and allowed in backcountry/wilderness. They are only allowed in frontcountry areas (e.g., Lily Lake, Sprague Lake, Coyote Valley, Bear Lake). There will be no constructed and maintained trails in Management Classes 1 and 2. Some designated routes may occur in Management Class 2 and may be maintained to Standard F. Trail Standards D, E and F are allowed in Management Class 3. Trail Standards B through F are allowed in Management Class 4. See Appendix F, Table 1 for more detail.

The 1982 Trail Plan further describes the construction and maintenance details of each trail standard, including treadway surface, grade/erosion control, wet areas, stream crossings, and other considerations. This description is located in Appendix D of the 1982 Trail Plan, The Trail System Maintenance and Reconstruction Plan 2000 and is reprinted in Appendix F, Table 2 of this plan.

2.1.4.7.3 Trail Work and Maintenance. Annual trail maintenance goals are to open and maintain every trail in the Park. Maintenance consists of clearing each trail of downfall, opening drains and drainage systems, minor restoration of tread, reconstruction of waterbars and other structures as required, and inventorying the trail for priority work. Reconstruction project work is prioritized for those areas where visitor safety and resource protection are most jeopardized.

Work on park trails is generally allowed via the categorical exclusion for established trails under NEPA and Section 106 of the National Historic Preservation Act as outlined in the Servicewide Programmatic Agreement July 17, 1995, stipulation IV.B.(6). A positive working relationship with the park cultural resource specialist will be maintained and identification of cultural resource indicators will be a basic part of a trail leader orientation. Protocols for work crews have been established which serves as a guide in the protection of cultural resources and enables work to proceed smoothly (Appendix B).

Trails will be maintained, constructed, or reconstructed to the standards established in the Rocky Mountain National Park Trail Plan (1982), the Trails Management Plan (1984), the Trail System Maintenance and Reconstruction Plan 2000 and the NPS Trails Management

Handbook (1983). Basic trail work and maintenance concepts and techniques are summarized below:

New trails. The Park will not generally design and construct new trails in the backcountry/wilderness except for trail reroutes or if critical to protect natural or cultural resources. The need for new trails will be evaluated on a case-by-case basis when necessary to balance visitor use and resource protection. New trail construction will require Project Proposal/Clearance review and approval and may require appropriate NEPA compliance (e.g., Environmental Assessment) and a Minimum Requirement Analysis (ROMO-180).

The marking of informal trails with plastic flagging, cairns, or other devices is prohibited. The only exceptions are by park management for emergency purposes (e.g., search and rescue and fire management) or when specifically approved in a research permit. Any marking must be removed immediately after the emergency operation or upon completion of the research. Historic cairns on the Flattop, Continental Divide, Ute and other trails will be maintained.

Reroutes. Routine rerouting of trail sections up to 100 feet to improve trail alignment is approved in accordance with the following trail reroute location guidelines. Reroutes of greater than 100 feet require Project Proposal/Clearance review and approval. Any reroute requires an archeological survey.

- **Grades.** All trail grades should be adjusted according to parent material and should not parallel slopes on unconsolidated soils. There should be less gradient on unconsolidated material.
- **Natural Drainage.** Subtle grade changes should be used to provide natural drainage. Avoid straight alignment both vertical and horizontal.
- **Streams or lakes.** Trails should be a minimum of 100 feet from streams or lakes, unless impossible due to terrain limitations. Leave some lakes and other attractions inaccessible by trail.
- **Meadows.** Wet meadows and soils subject to constant or prolonged wetness should be avoided. If such areas are unavoidable due to terrain, consider rock causeway or log turnpike structures to harden the trail tread.
- **Fords.** Trail locations should take advantage of safe fords, and, where feasible, fords should be designed for improved safe stock passage and to keep maintenance problems and erosion potential to a minimum.
- **Hiker camps.** Trails that are too close to camps will be considered for relocation.
- **Sensitive plants.** Trails will avoid sensitive plant populations. The sensitive plant inventory will be consulted before building new, or rerouting, existing trails. The 1982 Trail Plan references some sensitive plant locations (North Inlet). An updated map with locations of sensitive plants is currently being developed.
- **Cultural resources.** Trails will avoid sensitive cultural resource sites. The cultural resource inventory and park cultural resource specialist will be consulted before building new or rerouting existing trails.

As a result of a natural disaster (e.g., rockslide, avalanche) or an emergency, a trail may be rerouted outside of its established Management Class. The Management Class boundaries will be adjusted accordingly. This type of reroute will require Project Proposal/Clearance review and approval and any appropriate NEPA compliance (e.g., Environmental Assessment) and a Minimum Requirement Analysis (ROMO-180).

Non-maintained trails. Non-maintained trails will not be opened unless the proposed location and design is reviewed and approved through the Minimum Requirement Process. Unless abandoned trails are approved for reestablishment, only the 350 miles of regularly maintained trails are considered safe and will be signed and marked on maps. Publishers of guidebooks will be encouraged to do the same.

Trail crew impacts. Trail crew operations will avoid unacceptable impact on the resources and disturbance to the visitor.

Routine trail maintenance. Routine trail maintenance will include the removal of rocks and downed trees, clearing of brush, drainage system maintenance including waterbar cleaning and construction, restoration of damaged or eroded trail tread, reconstruction of rock walls, new construction of rock walls where conditions warrant, and bridge and footlog repairs and reconstruction. All tasks will be completed in accordance with annual work plans and availability of funds.

Erosion control. Erosion control will receive the highest priority in trail maintenance. All waterbars will be cleaned and repaired as project work is scheduled for that section of the trail. New waterbars will be constructed from rock; when rock is not available, logs may be used.

Loose rock. When loose rock is removed from the treadway, it will be put over the edge of the trail, usually on the lower side, in a safe manner which allows it to be available to be used in future tread reconstruction projects.

Fill material and borrow pits. Fill materials will be brought in from outside the Park whenever possible (U.S. Department of the Interior, National Park Service 1991a, Special Directive 91; and NPS Management Policies) to minimize the need to use borrow pits. This may involve the use of mechanical transport (e.g., helicopter) if material is not available on site and imported material is necessary to construct a sustainable trail surface. The Park will make every effort to avoid the introduction of exotic plant species as a result of using fill material from outside of the Park. Prior to bringing any fill material into the Park from a specific outside source, park staff should inspect it for the potential presence of exotic plant species and weed seeds and take measures to mitigate any possible introduction of such into the Park. In addition, any fill material must not come from an archeological site or from soils which might contain stone tool raw materials, a possible ARPA violation. In the future, the Park may require certification from the fill material providers that no archeological sites have been impacted in its excavation.

When a small amount of fill is needed, it should be obtained from waterbar (trail drainage) runoff areas or other trail tread wash out areas whenever possible. Work crews are not to gather fill materials from borrow pits on terraces or other flat areas along streams or lakes (areas of high potential for containing archeological sites), or in the vicinity of known prehistoric or historic archeological sites. Old borrow pits that are in unacceptable locations will be rehabilitated with logs, natural debris, and soil and will be revegetated with native plants where appropriate.

Trail tread. Restored trail tread will be filled to the original surface level by constructing a series of check steps to lock the restored material in place. Material will be obtained from former maintenance stockpiles and from areas adjacent to the trail, unless the volume of material needed creates a visual or physical impact. Wherever possible, material will be obtained from concealed, sustainable, locations such as minor drainages and waterbar runoff areas. Borrow pits will not be dug into the side of a trail. As trails are rerouted, the abandoned trail tread will be thoroughly rehabilitated.

2.1.4.7.4 Non-Maintained Routes. Areas without trails will not be made more accessible by new trail construction. Non-maintained routes that develop informally over time off the maintained trail system on popular crosscountry routes, will be watched for serious degradation, and may be modified to minimize accelerated impact. The trail crews, resources management crews, and Ranger staffs may accomplish monitoring and minor maintenance of these trails to a maximum of Trail Standard F.

The condition of the non-maintained routes has evolved as their popularity and use has increased. In order to provide a more primitive and unconfined type of experience, these routes will not be maintained in the future except in the situations where the impacts from use presents a potential source of degradation of the resources.

Where serious degradation is occurring on such routes, the following alternatives will be considered through the Minimum Requirement Process:

- Minimal maintenance to trail Standard F to correct the problem
- Minor construction to correct the problem
- Reroute portions or all of the non-maintained route
- Closure and rehabilitation of portions or all of the non-maintained route
- Addition to the maintained trail inventory and reconstruction and maintenance to Standard E.

2.1.4.7.5 Bridges and Footlogs. There are currently approximately 107 bridges and 190 footlogs in the RMNP backcountry/wilderness, constructed of native timbers, treated wood, and in many instance, steel beams. Appendix C, Table 9 details the complete list of bridges and footlogs by location. The bridges and footlogs have been constructed in locations that would present significant safety hazards under normal conditions, as well as resource impact, if a bridge were not there.

No new additional bridges will be built unless significant resource damage has occurred at a site. Any proposal for a new bridge will require the completion of a Minimum Requirement Analysis Worksheet (ROMO-180) as part of the Project Proposal/Clearance Process. Hardening of stream banks will be the preferred initial method of preventing this impact. It is the intent to use traditional type and style of bridge and footlog if replacement is needed. Construction material may be cut on site if it does not severely impact the resource, but for large projects, it is more desirable to bring material in from outside the Park area.

2.1.4.7.6 Bridge and Footlog Standards. Rocky Mountain National Park has adopted an approved bridge style that sustains the appearance of the historic backcountry bridges in the Park. This style is depicted in the NPS Trails Management Handbook (1983), sketch 14. The construction techniques and materials have been adapted to use more sustainable materials, protecting the immediate environment of the bridge from repeated logging for large materials.

Historic Rocky Mountain National Park style. The historic appearance is maintained using drywall rock abutments, bridge stringers with an appearance of logs (typically I-beams faced with partial logs), plank decking, and native material posts and rails, joined with traditional log joinery.

Existing bridges. Bridges that are in existence will be maintained. A list of existing bridges is found in Appendix C, Table 9. Existing bridges will be replaced if damaged and replacement is the best alternative. Replacement bridges shall conform to the historic style and rustic appearance that are compatible with the natural setting. Native materials, especially for minor bridges and footlogs, may be used if impacts are minimized.

Approved materials. Recommended and approved materials for major bridge replacement include steel I-beam stringers and pressure treated 3" x 12" deck. Approved materials for major bridge replacement and reconstruction are to be imported to the site whenever possible to avoid unnecessary impacts to the surrounding wilderness at the site. Post and railing materials may be obtained on site to keep the appearance of the bridge appropriate to the wilderness environment.

New/removal. All requests for new bridges or for removal of a bridge requires the completion of a Minimum Requirement Analysis Worksheet (ROMO-180) as part of the Project Proposal/Clearance Process.

Footlogs. The need for additional footlogs will be evaluated on a case-by-case basis, taking into account resource damage and visitor safety. Where footlogs are needed to access camp areas, they should be as minimal and unobtrusive as possible. Single foot logs are adequate for most situations. These should be leveled on top and cross-hashed to provide secure footing. If the crossing warrants a bridge, then standards outlined in the Trail Management Plan should be followed. The Area or District Ranger will be consulted.

2.1.4.7.7 Historic Trails and Bridges. Some trails have been nominated, or may be considered for nomination, to the National Register of Historic Places. These trails will be preserved and protected while stabilizing the trail structures for safety and historic preservation. In reconstruction, particular care and attention will be given to matching the historic appearance of new rockwork to adjacent historic sections. Historic cairns on the Flattop, Continental Divide, Ute and other trails will be maintained.

Rocky Mountain National Park has adopted an approved bridge style that sustains the appearance of the historic backcountry bridges in the Park. This style is depicted in the NPS Trails Management Handbook (1983), sketch 14.

2.1.4.7.8 Equipment and Tool Use. In order to adhere to Section 4(c) of the Wilderness Act, the Minimum Requirement Concept will be followed during trail work planning and operations. In all cases, the trail crew will seek to avoid, minimize or reduce the use of motorized equipment and mechanical transport, or their effect, in wilderness by searching for workable hand tools and techniques compatible with wilderness environments. Training to that effect is important and will be part of each season's orientation for all park trail workers. The use of traditional and primitive tools (e.g., shovels, rock bars, picks, pick mattocks, hammers from 1 to 16 lb.; Pulaskis, Macleods, and other fire tools; handsaws of various styles; basic rigging equipment including grip-hoists, come-alongs, all kinds of blocks and tackle, chain, wire rope, rope, and cable) will be emphasized.

The use of motorized equipment, mechanical transport, motorboats, or aircraft may be allowed if determined to be the minimum tool that causes the least overall impact to wilderness resources and character. Any use will be analyzed using the Minimum Requirement Process. For actions which motorized equipment and mechanical transport uses are approved, they will be planned to minimize impacts to park users and resources by utilizing the least obtrusive and impacting schedules. Season of year, day of week, and time of day will be considered. When approved for use, motorized equipment should be used sparingly and turned off when not in immediate use.

Any use of motorized equipment and mechanized transport for special projects (e.g., major reconstruction projects, major bridge or footlog construction or clearing of heavy downfall) requires the completion of a Minimum Requirement Analysis Worksheet (ROMO-180) as part of the Project Proposal/Clearance Process. Equipment and tool selection will be included as a component of any proposed special project in wilderness.

The use of the following motorized equipment, as outlined below, has been analyzed and is pre-approved for use during annual trail opening and routine trail operations. Any deviation from this will require a separate Minimum Requirement Analysis to be completed.

- **Chainsaws.** Chainsaws are allowed for the expeditious seasonal clearing of park trails of downfall to prevent resource impacts caused by park visitors being forced off-trail and establishing unwanted routes.
- **Rock drills.** Motorized rock drills are allowed as the minimum tools feasible for maintaining and reconstructing trails in the rugged rocky areas of RMNP, where major rock drilling or chipping is necessary.
- **Human powered wheelbarrows and carts.** These forms of mechanical transport are approved to be used to haul fill material and supplies to work sites when other means (e.g., stock) are not available or will create more impacts.

The use of motorized equipment and mechanical transport for annual trail opening and routine trail operations, other than those discussed above (e.g., vehicles, loaders, power wheelbarrows, generators, power winches and additional rigging equipment), will require review and approval for each proposed use following the Minimum Requirement Process (Section 2.1.4.1).

Helicopter use to transport appropriate trail tread material and bridge materials to project sites will be reviewed on a case-by-case basis and may be determined to be the minimum tool in some cases. Any proposed use will require the completion of a Minimum Requirement Analysis Worksheet (ROMO-180) and Flight Request Form (ROMO-47) as part of the Project Proposal/Clearance Process. Any approval will be based upon careful review of overall impacts to wilderness resources and character of the alternatives.

Explosives use is allowed for routine trail opening, trail construction and reconstruction and other major trail maintenance activities. All explosives use will be in full compliance with the National Park Service Explosives Use Program, as outlined in NPS-65.

2.1.4.7.9 Administrative Stock Use. Administrative stock (horses, mules and llamas) use for purposes such as resupplying patrol cabins and establishing, moving, and resupplying work crew camps is allowed on all park trails. In general, administrative stock is not allowed off trail except during emergency situations or for temporary hitching during the loading or unloading of

supplies. A minimum impact technique for securing stock will be used to mitigate any resource damage that would occur.

2.1.4.7.10 Monitoring. The focus of trail management is on visitor safety, system maintenance, and specific problem segments. The probability that any trail segment will deteriorate is a function of the trail's immediate environment, its design and maintenance, and the amount, type, and timing of use it receives. The factors that most influence trail conditions are trail location, design, and preventive maintenance. The principal solution to trail problems involves increasing the ability of the trail to withstand use (through improved engineering and construction) or changing the location of the trail to one that is more capable of withstanding use. Information is collected annually concerning trail facilities (e.g., bridges and footlogs), tread conditions, and erosion. Problem trail segments are identified, and those segments are either redesigned and reconstructed or relocated. The Park currently maintains and annually updates a survey of trail problem areas, and recommended solutions. This prioritized survey list is used to request and allocate funding. It is included in the Trail System Maintenance and Reconstruction Plan 2000.

2.1.4.8 Facilities

Wilderness, as defined by the Wilderness Act of 1964, is undeveloped federal land retaining its primeval character and influence, without permanent improvements. Accordingly, authorizations of NPS administrative facilities located within the wilderness boundaries shall be limited to the minimum number essential to meet the minimum requirements for effective administration of the wilderness area and the protection of the natural resources of the Park. A decision to construct, maintain, replace, or remove an administrative facility or structure shall be based primarily on whether such a facility is required to preserve wilderness character or values or is essential to ensure public safety and/or protection of the natural resource. The consideration of administrative convenience, economy of operations, or convenience to the public shall be subordinate issues to the primary issue of wilderness protection and values. In addition to the requirements of the Wilderness Act, decisions to maintain or remove an historic structure must further comply with cultural resource protection laws and policies.

As defined in Section 2.1.1 all structures such as cabins, fire lookouts, shelters, tent platform camps, and toilets are located in Management Class 3 and 4. In Management Class 2 areas, again by definition, only the minimum facilities necessary to protect the resource and delineate routes shall be allowed (e.g., minimal signs or cairns). In Management Class 1 areas no permanent structures of any kind shall be allowed except in the case of an identified cultural resources.

Administrative facilities shall be maintained and/or constructed only as deemed necessary to meet the minimum requirements needed to provide for the preservation of wilderness values and character and as additionally necessary to provide for the protection of the natural resource and to provide for visitor safety. In general, administrative convenience shall be considered a subordinate issue to the preservation of wilderness character.

2.1.4.8.1 Patrol Cabins and Tent Platform Camps. There are currently five patrol cabins within the wilderness boundary located at Thunder Lake, Chasm Meadows, Fern Lake, Lawn Lake, and North Fork. These structures are listed on the Park's List of Classified Structures (Appendix C, Table 10) and as such must comply with cultural resource protection policies. Current uses and preservation of these cabins and their associated support structures (e.g., toilets, corrals, etc.) shall be maintained. In the event; however, that a structure is damaged or

destroyed by fire, wind, avalanche or other natural disaster, the decision to replace the structure shall be based primarily on whether the structure is necessary for the administration of the area in order to preserve wilderness character and values, not solely on matters of administrative convenience. Patrol cabins shall be limited to existing locations; no additional patrol cabins shall be built.

There are currently four tent platform camps in the Park located at East Inlet, North Inlet, Tonahutu, and Hague Creek. These structures are temporary in nature. Any decision to reconstruct or improve tent platform camps shall be based upon whether the structure is the minimum necessary to preserve wilderness character and values, not solely on matters of administrative convenience. Tent platforms shall be limited to their existing locations, no additional locations will be allowed.

2.1.4.8.2 Fire Lookouts. No new fire lookouts shall be built within the wilderness boundary. Shadow Mountain Lookout is the only fire lookout in the Park and is listed on the Park's List of Classified Structures and is a significant historic resource. As such it shall be preserved and maintained in compliance with cultural resource protection laws and regulations. In maintaining this structure, consideration of appropriate minimum tools will be examined.

In the event that Shadow Mountain Lookout is damaged or destroyed by fire, wind, avalanche or other natural disaster, the decision to restore or replace it shall be based primarily on whether it is necessary for the administration of the area in order to preserve wilderness character and values, not solely on matters of administrative convenience.

2.1.4.8.3 Public Shelters. The Agnes Vaille shelter, located at the Keyhole on the very heavily traveled Longs Peak Trail, is the only public shelter within the wilderness boundary. This shelter is on the Park's List of Classified Structures and as such must comply with cultural resource protection policies. Decisions regarding the maintenance of this structure must take into account wilderness values, cultural resources values, minimum requirements and visitor safety issues.

No new public shelters will be built within the wilderness boundary.

2.1.4.8.4 Radio Repeaters. There are two radio repeaters within the backcountry/wilderness boundary. They are located at the summit of Twin Sisters and at Red Mountain. The Twin Sisters structure is a former fire lookout cabin that is shared with the USFS and BLM to house radio repeater equipment.

These structures are considered essential for public safety and administrative use. Repairs and improvements to these facilities will be accomplished using the Minimum Requirement Process. Generally, new radio repeaters, or other communications towers, equipment or facilities, will not be allowed unless approved following analysis through the Minimum Requirement Process.

2.1.4.8.5 Corrals and Hitchrails. Corrals located near patrol cabins and camps are permitted to avoid resource damage and conflicts with private and commercial stock users. Due to concerns about transmission of disease and maintenance issues, the corrals are for park stock only. Private and commercial users must use hitchrails. A list of corrals and hitch rails are in Appendix C, Tables 7 and 8.

Corrals are to be built from treated posts and rails hauled in to the site. They are to be built in the least obtrusive location as possible. A small metal water tank is permitted and should be a muted color.

Hitchrails are allowed at stock camp areas and at day use destination areas. They will generally be three sided structures built using local materials if it does not substantially impact the area. Treated timbers may be hauled in order to protect local resources.

2.1.4.8.6 Human Waste Management Systems. Human waste and the activities related to its disposal can result in significant impacts to wilderness resources and the visitors' wilderness experience. Improper disposal of human waste can result in nutrients and pathogens contaminating surface waters, ground water, and soils. Development of social trails to access cat holes and toilet sites, digging toilet holes, and the excavation of urine deposit sites by wildlife all result in impacts to vegetation and soils. The development of social trails and toilet holes may also impact cultural resources. Impacts to wildlife result when wildlife ingests fecal material. The presence and strong smells of toilet paper and fecal material on the soil, rock, or snow surface impact the aesthetics of wilderness. Toilet structures intrude on the wilderness setting, and the use of helicopters to transport toilet structures impacts its natural quiet. The level of visitor use is the primary factor affecting the degree of human waste related impacts. Methods selected for the disposal of human waste also directly influence the nature and quantity of resulting impacts. A major emphasis must first be placed on educating wilderness users in proper sanitation practices (e.g., pack-it-out, cat hole) before a toilet facility (e.g., pit, composting or solar) is considered for an area. If alternatives to toilets are ineffective at reducing unacceptable impacts, toilets may be placed or replaced to resolve health and sanitation problems or prevent serious resource damage.

Toilets may only be located in Management Class 3 and occasionally in Management Class 4 when placement of a toilet at a trailhead does not resolve the problem. Only the minimum number of toilets necessary to meet wilderness management objectives are allowed. The minimum type and structure design is to be selected. Where practicable, toilets should be located out of view of any main trail, to limit visual impact on visitors travelling the trail corridor. Toilets currently in place will be periodically evaluated to determine if they are still needed; if not, they will be removed.

A Backcountry Area/Site Proposal (ROMO-168) and a Minimum Requirement Analysis Worksheet (ROMO-180) is required for the addition of a new toilet in a new location, or the placement of a different type of toilet than presently exists. Digging a new hole for an existing pit privy requires a Backcountry Area/Site Proposal (ROMO-168).

There are five types of toilet systems that will be considered and may be used depending on the circumstances: the pack it out method, cat hole system, pit toilet or privy, dehydrating/composting toilet and solar toilet.

- **Pack-it-out method.** This method is the best for minimizing resource impacts; however, currently it is the least desirable. Advances in technology of degradable bags, gelling agents, odor neutralizers, decay catalysts, and ability to dispose of in trash containers will make this method more acceptable to visitors. Over time more backcountry users may use this method. Park staff should encourage this method when at all possible. Park work crews using temporary spike camps should use some sort of pack-it-out method to minimize resource impacts.

- **Cat hole system.** The cat hole human waste disposal method is only effective if carried out correctly. Human waste should be buried 6-8 inches in organic soil and disposed of at least 200 feet (70 adult steps) from water. In Management Classes 1 and 2 the cat hole system is the preferred method, along with pack-it-out method.

The cat hole system is also preferred in Management Classes 3 and 4 where the combination of education and visitor use levels is successful in limiting unacceptable impacts. In locations where water quality degradation, recurring toilet paper blooms and visible feces, and multiple visitor complaints cannot be reduced through these two methods, an alternative human waste system will be considered. In areas where the cat hole system is selected for disposal of human waste, the goal will be for no toilet paper or human waste to be visible on the soil, rock, or snow surface and no water quality impacts to occur.

- **Pit toilet or privy system.** The pit toilet system has the potential to significantly impact wilderness resources. Toilets shall be considered on a case-by-case basis at designated backcountry campsites or at heavily visited areas (e.g., Ouzel Falls, the Pool, Lulu City) where protection of the natural resource is threatened by high use. High water tables, minimal soil depths at higher altitudes, and archaeological resources may make appropriate siting of pit toilets difficult.

Pit toilets will be placed at least 200 feet from water. Privies should not be dug into the water table. Current privies that have ground water infiltration will be removed and relocated. Privy pits will be as deep as can be hand dug. Explosives and motorized equipment will not be used in construction. The diameter of the hole will not exceed the standard one-seater toilet size. Pit toilets may be placed in or near designated camp areas if visitor use levels exceed 200 visitor use nights per year.

Stools, with white seats, on a plywood base will be standard for privies. Privacy screening should be provided only if necessary, such as in high-use areas or where there is minimal natural vegetative screening, and kept to the minimum appropriate. Constructed screening may range from a single low wall to a full outhouse structure. Screening walls should be made of natural materials to blend into the surrounding environment. Structures should be made of wood, resistant to the elements, and visually appropriate in a rustic design. All screening or structures should be light enough in weight to be moved relatively easily and modular so they can be moved in pieces. The size should be functionally adequate but kept to the minimum necessary. As with all facilities, toilets should be the minimum structure necessary to meet management objectives. Full outhouse structures should be kept to a minimum. Current outhouse structures will be evaluated to determine if they are still necessary.

Pit toilets currently in place will be assessed for their continued need and risk to water quality. Those at high risk of contaminating water will be relocated. Pit toilets that cannot be relocated to meet the siting criteria will be replaced with dehydrating/composting toilets. If pits fill at a rate that requires toilets to be moved more than once in three years, or one pit toilet cannot adequately handle the waste produced in a camping area, either an alternative toilet system will be installed or visitor use levels will be restricted in the area.

- **Dehydrating/composting toilets.** Composting and dehydrating toilets provide new options for managing human waste. These systems may result in less impact than pits

toilets. If a toilet is determined necessary, and a pit toilet will result in unacceptable impacts to wilderness resources, a dehydrating/composting toilet should be considered.

These types of toilets are a good alternative and should be considered in areas with little or no soil, high water tables, or in confined areas where digging new pits are no longer practical or desired. Current composting/dehydrating toilet designs require a certain level of regular attention and can not withstand high use. Bulking agents (e.g., peat moss) are required that need to be added and mixed in. These requirements must also be considered in the placement of composting/dehydrating toilets.

- **Solar toilets.** Human waste disposal in the high altitude, fragile, alpine areas and on bedrock (e.g., the Boulderfield, Chasm Junction, Chasm Meadows, Gem Lake) has long been a problem. In 1983 solar toilets were installed above treeline in the Longs Peak area in an attempt to cope with the harsh environment and high numbers of visitors attempting to climb Longs Peak. They have proven to be a highly effective method of human waste disposal under these circumstances. As advances are made in solar technology, the Park will consider improvements to existing solar toilets as long as the protection of wilderness is not compromised (e.g., visual intrusion). Other locations may be evaluated that may benefit from solar toilet technology.

Wilderness managers will keep abreast of new technology for human waste management to determine availability of more effective systems to meet wilderness goals. New innovations in human waste management may be considered if the benefits of such devices (e.g., photovoltaics, fans, small pumps, etc.) significantly improve protection of the natural resource. A list of current privy locations and types is in Appendix C, Table 11.

2.1.4.8.7 Food Protection Devices. Feeding of wildlife by visitors, both overtly and inadvertently, can significantly affect wildlife by altering natural diet and causing nuisance behavior to develop. Loss of food supplies and equipment and potentially dangerous interactions between visitors and animals can adversely affect the visitors' wilderness experience. Food protection systems can be an important tool in minimizing unacceptable interactions.

Visitors and park staff are required to secure food and other scented items (e.g., toothpaste, deodorant) from wildlife when not immediately being prepared, eaten, or otherwise used. Hanging items, 10 feet high and 4 feet out, or using a portable food storage container is recommended.

If unacceptable impacts between visitors and wildlife occur, or potential for problems is high, visitors may be required to carry and use portable food storage systems or use fixed food storage systems provided. Alternatively, areas may be closed if there are unacceptable impacts to wildlife or visitor safety is jeopardized.

Food storage devices (e.g., "bear" poles and storage containers) may be placed at designated camp areas. These devices may only be located where a demonstrated need exists and should be removed when determined that they are no longer necessary. They are to be kept to the minimum design necessary. Resource impacts may result from the design and placement of such systems. A Backcountry Area/Site Proposal (ROMO-168) and a Minimum Requirement Analysis Worksheet (ROMO-180) may be required before a device is put in place.

2.1.4.8.8 Can Camps and Caches. Can camps are caches of camping and emergency equipment typically stored in metal trash cans or other weather proof containers in remote areas

for use by park staff. They are intended to expedite preparedness for patrols, searches or rescues.

The number of can camps and caches should be kept to a minimum. The establishment of new can camps and caches will be analyzed using the Minimum Requirement Process. They shall be removed when determined to be no longer needed.

The public is prohibited from establishing and using food or equipment caches.

2.1.4.8.9 Work Crew Camps. To effectively conduct work in the backcountry/wilderness, it is necessary for park work crews (e.g., ranger or resources rehabilitation, trail or fire project, approved research, archeological survey) to occasionally occupy designated campsites or set up temporary spike camps. The use of spike camps for greater than 7 total days for special projects should be discussed in the appropriate Project Proposal/ Clearance Process, including a Minimum Requirement Analysis, and gain approval.

The use of designated campsites is preferable; however, to reduce conflicts with public use, in high demand areas, the use of designated campsites should be kept to a minimum during high use periods, generally mid June through mid September. When the use of designated campsites is needed, they can be reserved through the Backcountry Campsite Reservation System, before public reservations, prior to March 1st. After March 1st they can be reserved contingent upon availability. Any deviation from backcountry camping guidelines (e.g., length of stay, group size) requires review of the Wilderness Program Specialist or Backcountry Office Manager and may require approval from the Superintendent.

Spike camps are to be temporary in nature. When spike camps are needed, the project leader, in consultation with the Wilderness Program Specialist and the appropriate District Ranger, will scout out and select a location well in advance to find the most suitable area close to the work site. Leave No Trace camping techniques will be used at all spike camps. No permanent structures will be constructed to support the camp. Temporary structures (e.g., raised platforms and walkways) may be used to protect sensitive resources (e.g., tundra), but will be removed. Amenities are to be kept to the minimum level necessary and serve as an example of minimum impact practices. Equipment, such as tents and tarps, should blend in with the natural environment. Spike camps will be located out of sight and sound of any trail or designated camp area, below treeline, 200 feet (70 adult steps) from any water source and in a durable area.

The crew size will be determined by the scope of the project; however, generally it should be kept to a maximum of 7 persons. Any deviation from this requires the approval of the Superintendent. A pack-it-out human waste system is preferred when the spike camp is used for more than five days. For shorter duration or if the area is suitable, the cathole method may be used. Food, trash and scented items must be properly protected from wildlife at all times (e.g., wildlife proof storage containers or the hanging method). Campfires generally are not allowed. They may be allowed if the spike camp is within a mile of a designated wood fire campsite or approved by the Superintendent. In those circumstances, an elevated fire pan will be required. Administrative stock may be used to support the spike camp, but generally not be allowed to be kept overnight. Repeated use of the same spike camp location is discouraged, except when it is the only suitable site close to a multi-year work project. Any impacts to the area will be immediately rehabilitated once the spike camp is vacated for the season or at the completion of a multi-year project.

2.1.4.8.10 Research Facilities and Equipment. Research facilities and equipment shall be considered on a case-by-case basis and shall be of the minimum size and configuration necessary to achieve the desired research results. Existing research policy will be used to determine whether a proposed research project will be allowed; however, in general, research projects which involve significant facilities and equipment are discouraged and shall be approved only if the project has significant benefit to the Park and cannot be accomplished outside the wilderness boundary. All research equipment and facilities shall be temporary in nature and designed to facilitate easy removal. Administrative convenience shall not be considered as a determining factor in the decision to allow research facilities or equipment within the wilderness boundary.

2.1.4.8.11 Helispots. No permanent helispots shall be constructed within the wilderness boundary. Temporary landing areas for helicopters may be used to meet the minimum requirements of emergency situations and to provide for public safety. Site improvements determined to be essential for safety reasons during individual emergency situations may be authorized by the Superintendent, but the site shall be restored to natural condition as soon as possible after the emergency has ended. Site improvements will not be allowed for non-emergency helicopter landings.

2.1.4.8.12 Route and Other Markings. Cairns may be used as necessary to define a route or to provide for public safety; however, the construction of new cairns is discouraged except in cases where it is necessary to protect the natural resource. They should be no bigger than one foot high, with the exception of the historic cairns on Flattop Mountain that will be maintained in their historic fashion. The historic cairns on the Flattop, Continental Divide, Ute and other trails will be maintained. When staff finds cairns off trail and in remote areas, they should determine if the cairns are historic or not before a decision is made to dismantle them.

The red and yellow paint markings known as the "fried eggs" along the route to the summit of Longs Peak between the Keyhole and the Trough and the painted white circle and arrow known as "Clark's Arrow", in the Loft between Mount Meeker and Longs Peak, will be allowed.

Flagging and other temporary markings in any area are prohibited except during emergency operations or as approved for research and monitoring. If used, they must be removed once the activity has concluded.

2.1.4.8.13 Signs. Certain signs in the backcountry/wilderness are allowed to provide orientation, safety and regulatory information. Signs are necessary to manage and protect resources and visitors; however, they should not unduly intrude on the backcountry/wilderness scene as stated in the 1988 document Design Standards for Backcountry Signs. That document provides guidelines for park backcountry/wilderness signs with respect to sign types, materials, content, approval and implementation. The Backcountry/Wilderness Management Plan will take precedence in the event of any inconsistencies.

There are approximately 1200 signs in the backcountry/wilderness. In general, signs shall not be used within the Management Class 1 areas, except signs marking the boundary, shall be infrequently used in the Management Class 2 areas, and used as necessary in Management Class 3 and 4 areas. Where signs are used they shall be compatible with the natural environment and of the minimum size practicable.

Existing interpretive signs are generally incompatible with wilderness values and shall be removed when the opportunity arises. No new interpretive signs shall be installed within the

wilderness. Interpretive signs may be placed along the following frontcountry Interpretive Nature Trails: Coyote Valley, Huffers Hill, Toll Memorial, Forest Canyon, Lily Lake, Sprague Lake and Bear Lake.

Signs intended to protect natural and cultural resources (e.g., tundra, archeological sites) shall be of minimum size and shall not include interpretive messages.

The interpretive sign at Bluebird Lake was installed to interpret the history of the historic Bluebird Dam as part of the agreement that allowed demolition of the dam. The interpretive sign near Calypso Cascades was installed to interpret the Ouzel Fire of 1978. When these signs have served their useful life or have significantly deteriorated they shall be removed and not replaced.

2.1.4.8.14 Fencing and Retaining Walls. Fences and retaining walls detract from the wilderness scene and are generally not allowed. On a case-by-case basis, in order to protect resources or provide for visitor safety, they may be allowed if other techniques (e.g., education, signing) are not adequate or feasible. Fencing should be removed when no longer needed.

Any proposal to erect fencing or retaining walls requires the completion of a Minimum Requirement Analysis Worksheet and must go through the Project Proposal/Compliance Process. The proposal will specify the reason for the fence, its exact location, the type of fence, the amount of fence and the tools needed for construction.

Fencing may be constructed of wood or rock that best blends into the surrounding area. Materials for fencing and retaining walls may be obtained near the site or hauled in. Wooden fencing may be in the form of the "Stevens fence", buck and rail, or post and rail. Rock retaining walls should be as small and low as possible to achieve the desired objective. Minimum tool techniques should be used during construction.

Historic fences will be documented and then allowed to disintegrate in place. Likewise, rock walls, cairns and other features that may be either historic or prehistoric in age shall not be disturbed.

2.1.4.8.15 Snotel Sites. Snotel sites may be allowed in backcountry/wilderness areas. There are currently 5 snotel sites, installed in the late 1970's, within the backcountry/wilderness: Copeland Lake, Bear Lake, Willow Park, Lake Irene, and Phantom Ranch (Appendix C, Table 10). Any proposed relocation of these existing sites or installation of a new site will require the completion of a Minimum Requirement Analysis Worksheet and must go through the Project Proposal/Compliance Process. Appropriate NEPA compliance may be required (e.g., Environmental Assessment). Instrumentation installed at any site will be kept to a minimum. All maintenance trips to and maintenance of a site will be done in compliance with the Minimum Requirement Concept.

2.1.4.8.16 Use of Minimum Tools for Facility Maintenance. In general, the maintenance, rehabilitation, and reconstruction of any backcountry/wilderness structure shall be accomplished using the minimum tool necessary for the job. This requires analysis of the impacts of the tools to be used on wilderness values. Issues such as duration and intensity of noise levels, means for transporting materials and tools to the job site, use of local materials versus materials brought to the site, etc., shall be considered in the determination of minimum tool. The consideration of minimum tool will be addressed when a Project Proposal/Clearance form is circulated for review by the park staff.

Convenience alone shall not be considered sufficient justification for the use of motorized equipment and mechanical transport. However, it is recognized that certain modern tools may expedite a project significantly and thereby minimize the duration of disturbance to wilderness values. In such cases that these tools are approved for use, efforts will be made to minimize the duration and intensity of the disturbance. Refer to Section 2.1.4.1 for detailed information on the Minimum Requirement Concept and Analysis.

2.1.4.9 Research and Resource Monitoring

The Wilderness Act states that Wilderness shall be devoted to specific public purposes including scientific, educational, and conservation use. Management Policies outline that "the National Park Service will fully support the value of wilderness areas as natural outdoor laboratories". Scientific activities will be encouraged in the wilderness, including those scientific activities (inventorying, monitoring, and research) that involve a potential impact to wilderness resources or values (including access, ground disturbance use of equipment, animal welfare, etc) when it is clearly demonstrated that the benefits of what can be learned outweigh short term impacts on the wilderness resource and values. All scientific activities will be accomplished in compliance with NPS Management Policies, Director's Orders, and guidelines specified in this plan.

Research projects may be approved and conducted in wilderness, according to policy, when the following requirements are met: 1) the research activities are otherwise allowable under federal laws and regulations; 2) there is no alternative to conducting the research in wilderness; 3) the project will not adversely affect physical or biological resources, ecosystem processes, or aesthetic values over an area or duration greater than necessary to meet research objectives; and 4) the project will not interfere with recreational, scenic, or conservation purposes of the wilderness over a broad area or long duration.

2.1.4.9.1 General guidelines. Wilderness provides the opportunity to study natural processes that are still relatively unaltered by human effects, yet research projects and their associated activities may adversely impact wilderness resources and the visitor's wilderness experience. All proposed scientific activities will be reviewed by the Park's Research Administrator and may require being processed through the Project Proposal/Clearance Process. All aspects of scientific activities (e.g., project, facilities and equipment) must follow the Minimum Requirement Concept identified in Section 2.1.4.1. Scientific activities must be conducted using the minimum techniques and tools necessary for the minimum time necessary to meet wilderness and research objectives. Proposals from non-Park researchers to conduct research within the wilderness require a Research Permit. Researchers are required to follow Backcountry/Wilderness Management Plan guidelines and regulations (e.g., group size, backcountry camping, Leave No Trace ethics, and techniques).

Manipulative research that could potentially disrupt natural processes will only be allowed if the policy requirements are met and the research will benefit protection or management of wilderness resources or character. Manipulative research is to be kept to the minimum necessary to meet wilderness and research objectives. Approval for manipulative research will be based on the potential amount of disruption to natural processes, the type and extent of other adverse impacts on wilderness conditions, the value of the research for wilderness protection and management or overall benefit to society as a whole and the potential for restoration. Research involving ground disturbance (e.g., test pits, large excavations) must be approved in advance and all such excavations must be backfilled, the surface re-contoured and the area re-vegetated.

All scientific activities will be accomplished in accordance with terms and conditions adopted at the time the research permit is approved. A checklist of information and requirements pertaining to conducting research in wilderness will be developed. This will be given to potential researchers to better educate them on the wilderness resource and sideboards that must be followed. Research being conducted in wilderness will be reviewed annually to determine if the project still meets policy criteria, if the research objectives have changed, if equipment or facilities are still necessary, if the timeline for the project needs to be altered and what the research results have shown. Any modification to the original activity will require additional approval.

2.1.4.9.2 Facilities/equipment. Research devices are sometimes required in order to carry out research projects, but they can intrude upon the visitor's wilderness experience as well as impact wilderness resources. Management Policies state that research and monitoring devices may be installed and operated in wilderness if the desired information is essential and cannot be obtained outside wilderness, and the proposed device is the minimum tool necessary to meet the project objectives safely and successfully.

When determining if research projects will be approved, consideration will be given to what research facilities will be required. Criteria for determining whether research equipment or facilities are appropriate will be based on the value of the research for wilderness protection and management, the length of time the equipment will remain, the relative intrusion of such equipment in the wilderness setting, the ease of removal and the potential for site restoration. Facilities or equipment must meet Backcountry/Wilderness Management Plan facility standards identified in Section 2.1.4.8.

All equipment must be temporary; no hardened sites will be permitted. Research equipment should be placed out of sight and sound of the trail corridors and visitor use areas to the maximum extent possible. Permanent equipment caches are not allowed in wilderness. Long term research will only be permitted if it is shown to be of over-riding benefit to proper park management and with the express written consent of the Superintendent. Temporary marking (e.g., flagging, cairns) of plots, equipment and access routes may be allowed if approved in the research permit. Markings will be kept to an absolute minimum and removed immediately when no longer needed. The responsible researcher is required to restore any impacts to the research site and is responsible for removal of all equipment when it is no longer essential.

Research equipment presently in place will be evaluated according to these criteria to determine if removal is prescribed. If removal is warranted, the Park together with the researchers will determine the responsible party for carrying out removal action, payment and target date for removal. For ongoing projects, the use of research equipment will be reviewed on an annual basis to determine if it is still necessary and if it still meets the Minimum Requirement Concept.

2.1.4.9.3 Aircraft use. Aircraft will only be used for research and monitoring purposes if it is the minimum tool necessary to achieve wilderness and research or inventory and monitoring objectives, and without aircraft support the activity cannot be safely or successfully accomplished. All scientific activities that propose the use of aircraft will discuss, including alternatives to aircraft, and justify such use, when submitting preliminary proposals. A completed Flight Request Form (ROMO-47) will be required with the final proposal for review and approval.

2.1.4.9.4 Research Natural Areas. Three Research Natural Areas, all within recommended wilderness, were established in the Park in the 1970's: Paradise Park, Specimen Mountain, and

West Creek. These areas were set aside as prime examples of natural ecosystems in the Southern Rocky Mountains and are considered to have significant genetic resources that have value for long-term baseline studies. They are part of a worldwide system of natural areas for scientific and educational purposes that has been established by the International Biological Program. All three are within Management Class 1.

They are managed to provide the greatest possible protection of ecosystem integrity. Natural processes are allowed to function and act as important baselines, against which human caused changes elsewhere can be measured, without human interference. Activities in the Research Natural Areas will be restricted to non-manipulative research, education, and other activities that will not detract from the area's values.

Only foot traffic is allowed. Stock use, aircraft use and overnight camping is not allowed, except in an emergency or if specifically approved by the Superintendent. Day-use is not encouraged and trails will not be constructed or maintained. An exception is the hiking trail to the crater on Specimen Mountain. Permanent structures and facilities are not allowed.

2.1.4.10 Wilderness Interpretation and Education

Interpretation can best be defined in the words of Freeman Tilden, in Interpreting Our Heritage as "An educational activity which aims to reveal meanings and relationships through the use of original objects, by firsthand experience, and by illustrative media, rather than simply to communicate factual information."

Wilderness education is perhaps the most important tool for ensuring the protection of wilderness resources and character. National Park Service Management Policy calls for an effective public wilderness education program to be developed and maintained.

The program is to:

"...promote and perpetuate public awareness of, and appreciation for, wilderness character, resources and ethics, while providing for acceptable use limits..."

The program is also to focus on:

"...fostering an understanding of the concept of wilderness that includes respect for the resource, willingness to exercise self-restraint in demanding access to it, and an ability to adhere to appropriate, minimum-impact techniques; and encourage the public to use and accept wilderness on its own terms..."

Rocky Mountain National Park is dedicated and mandated to provide interpretive and educational activities that assist the visitor in understanding the problems and issues of management and resource values, as well as promoting safety consciousness, enjoyment, and respect for the Park. Wilderness values were one of the primary reasons the Park was founded and enabled. Through the Park's Interpretive program, these values are shared with the American public and park visitors from around the world.

Through the Park's Outreach Program, this mandate is expanded to reaching other publics that may never visit, or that live in neighboring communities. Coordination with neighboring land management agencies, which administer wilderness, will be a priority to ensure consistency in wilderness educational messages.

The Park will follow guidance set forth in the newly developed NPS Wilderness Education and Partnership Plan. There are three basic objectives for educational programs administered by the National Park Service:

- To foster public understanding and appreciation of the National Parks and their significant cultural, natural, and recreational values and through this understanding, support preserving them.
- To encourage and facilitate appropriate, safe, and minimum impact use of the parks.
- To promote public understanding and acceptance of the Service's policies and programs.

2.1.4.10.1 Themes. Interpretive themes provide a broad base to communicate specific messages to ensure the preservation and protection of wilderness values. Significance statements about the wilderness are the guides to specific topics and programs. These are the stories through which the values of wilderness are conveyed to the public and NPS staff. The themes are the building blocks for interpretive products and services. Themes are intended to encompass wilderness as a whole, but at the same time used to focus in on specific park issues of concern.

Rocky Mountain National Park's Interpretation and Educational Program will be based on NPS Wilderness Educational and Partnership Plan and park specific wilderness themes. Individuals will have the freedom to use the educational style and technique which works for them; however, the specific personal and non-personal services will tier off of and capture the essence of the broader themes which include:

- Some wildlands are most valuable when left in their natural state. Visitors will be encouraged to examine the content and intent of the Wilderness Act and the National Wilderness Preservation System.
- Wilderness is a foundation for a healthy and diverse ecosystem. It plays a significant role in the overall health of natural ecosystems.
- Wilderness is preserved in order to retain its primeval character and natural conditions, which is a special place for humans to examine their relationship to the natural world.
- Wilderness offers opportunities for personal renewal, inspiration, artistic expression, pride of ownership of a shared heritage, and the prospect of hope for the future.
- Wilderness provides opportunity for physical and mental challenge, risk and reward, renewal, self-reliance, solitude, and serves as a haven from the pressures of modern society.
- Individual and societal support to the idea of wilderness and appropriate use and behavior is imperative to the future of wilderness. Visitors will be encouraged to develop and participate in Leave No Trace travel and camping ethics.
- Wilderness provides a unique setting for teaching ecosystem stewardship and interdisciplinary subject matter. Wilderness education will include the mitigation of impacts to wilderness resources.
- Wilderness is a place where research can uncover information about natural processes and living systems in a relatively undisturbed setting.
- Humans can become connected to the past through cultural and archeological study and discover how humans interaction with wildlands occurred.

2.1.4.10.2 Audiences. Rocky Mountain National Park will take a multi-faceted approach to wilderness education and outreach that will span all management divisions, and will be directed

at a wide variety of audiences. These efforts will be directed not only at park visitors, but will target populations that might never visit the Park, but who may live in the area, region, or other parts of the country. Efforts will also be made to educate park staff on the meaning and scope of wilderness preservation as it applies to the mission of RMNP, and the National Park Service. The NPS identifies 7 broad audiences. Each may be broken into more specific target audiences. These include:

- NPS, concessionaire, and cooperating association staffs
- Wilderness visitors
- Park visitors
- Student education program participants (e.g., schools, Girl and Boy Scouts)
- Neighboring communities
- Urban communities
- Non-government organizations including friends groups

The new NPS Wilderness Education and Partnership Plan will be the cornerstone of internal and external education efforts.

2.1.4.10.3 Internal Education. In order to build support for the concept of wilderness management in RMNP, the logical starting point is educating park, concessionaire, and cooperating association staffs about the need for and ramifications of aligning management decisions with consideration of the Wilderness Act. Employees are also citizens of the surrounding gateway communities, and often times find themselves acting as “ambassadors” for the Park in their day-to-day lives. Their daily conversations with friends, neighbors, and relatives has a profound impact upon perceptions of the Park in the local community. It is essential that all employees have a working knowledge of the management requirements of a wilderness area such as Rocky Mountain. More importantly, helping employees develop a deep appreciation of wilderness as an enduring resource is imperative.

The exceptional wilderness character of the backcountry of RMNP is often easy to take for granted. The compelling story of wilderness and its heritage in historical context to development of the continent must be conveyed. The Park at every opportunity should discuss the basic requirements of wilderness management and messages of the Park with employees.

Internal education efforts will include all employee, division and work unit meetings. The Park Wilderness Program Specialist, and other staff with an in-depth knowledge of wilderness, will be available to talk with individuals or groups of employees and provide park specific training. Wilderness topics and issues should be a part of annual seasonal training sessions (e.g., ranger, trail crew, resource crew, interpreter). Wilderness information will be incorporated in seasonal handbooks.

Employees are encouraged to attend regional and national wilderness training courses as well as participant in local university and long distance wilderness correspondence courses with the approval of their supervisor. Outreach programs and training to park volunteers (individuals and groups), concessionaires and the Rocky Mountain Nature Association should be conducted as necessary.

2.1.4.10.4 External Education. Educational efforts will serve both the visiting and non-visiting public. These efforts can be categorized as “personal”, and “non-personal” services.

2.1.4.10.5 Personal Services. Personal Services are those that involve direct contact between park staff or those acting in conjunction with the Park, and the public. These services include interpretive, education, and outreach programs, and other special programs. All services that occur within the backcountry/wilderness will be conducted within group size recommendations established by this plan (Section 2.1.3.1.1). The following are on-going or planned wilderness education efforts.

Formal Interpretive Programs. Rocky Mountain National Park offers a variety of programs that focus either directly on wilderness as a resource, or use related themes to convey wilderness values. Examples of programs which indirectly provide wilderness messages include:

General programs about ecology such as:

- Nature walks.
- Wildlife programs about Rocky Mountain mammals and their need for undeveloped habitat.
- Cultural history programs which describe the interaction of early peoples with nature in primitive settings.
- Photography programs by Kodak which use landscape aesthetics.
- Children's Junior Ranger programs which provide "hands-on" activities about wilderness ethics, and
- Evening programs in which people rediscover the wilderness of the night sky.

The Park offers an hour and a half long interpretive program to the visiting public called Treading Lightly, which is offered in the evening at various campground amphitheaters. The program discusses wilderness ethics and presents the Leave No Trace principals of wilderness travel.

Roving Interpretive Programs. These offer the possibility of giving short message impressions about wilderness to front country visitors at overlooks, campgrounds, and visitor centers. Seasonal rangers will be trained to emphasize these values in their visitor contacts.

Leave No Trace Programs. The Park will conduct Leave No Trace presentations to local community groups and organizations. The Park's Education and Outreach Program will be an instrumental part of sharing Leave No Trace messages. The emphasis with this program is with youth groups such as the scouts and other outdoor groups. Through the Park's Rocky Mountain Corps of Discovery, children from underrepresented populations have experienced Leave No Trace through ranger lead hiking and camping activities. The principles of Leave No Trace are listed in Appendix G.

Education Programs. The Park's Heart of the Rockies Education Program provides curriculum based activities to school aged children. The program uses the "Wilderness Box" activity trunk developed by the Forest Service's Region 2 office as an adjunct to certain units of study. The Wilderness Box is used mostly in visits to schools by park rangers.

Outreach Program. Each year the Park's Outreach Program presents programs to many diverse community organizations about management issues. Wilderness programs are presented to Rotary and Lions Clubs, Chambers of Commerce, conservation groups such as Audubon and the Sierra Club, and civic group such as the League of Women Voters.

Lyceum Programs. The Park has an active Lyceum Program that offers Saturday night programs to the general public at the Beaver Meadows/Headquarters Visitor Center. Outside speakers of renown make presentations about topics in their field. Future plans call for Lyceum speakers about wilderness.

Artist-In Residence Program. The Artist-In-Residence program attracts nationally recognized artist who work with a variety of mediums to express the inspiration of RMNP. Many visual artists have produced works depicting the grandeur of the Park's wilderness landscape. These artists share the production of their works with visitors as part of the experience. This program should have a special "wilderness landscapes" theme for an upcoming season.

Rocky Mountain Seminars. The Rocky Mountain Nature Association, a non-profit friends groups of RMNP, sponsors an acclaimed seminar series during the summers. Many of the nature seminars offer indirect wilderness themes. An effort should be made to offer a multi-day seminar specifically about wilderness values as a backcountry experience.

Elderhostel. The Park should participate in Elderhostel programs coordinated by the YMCA of the Rockies. Rangers can lead participants on guided hikes in the Park, and have emphasized wilderness ethics and values.

March For The Parks. Each year the March For The Parks walk raises money for non-profit organizations that support national parks. A wilderness theme year should be used to generate public support for wilderness management of RMNP.

2.1.4.10.6 Non-personal Services. Non-personal services are those which contact both visitors and non-visitors through other than face-to-face means. Examples include print and electronic media, permanent exhibits, temporary displays, and information kiosks.

Park Film. The Park's orientation film that is shown continually in the Beaver Meadows/Headquarters Visitor Center is dated and will be replaced in the near future. At that time, it should include a stronger wilderness message and focus.

Press Packets. These should be developed and distributed by the Park's Public Information Officer to an extensive media contact list. The packet would include an official briefing paper containing the Superintendent's statement about the wilderness values of RMNP.

High Country Headlines. The Park produces a seasonal newspaper distributed to all visitors who pass through the entrance gates, mailings and to many other through outreach programs. The paper has featured articles about the wilderness values of RMNP, and Leave No Trace techniques. These stories will continue to be featured in future issues.

Permanent Exhibits. Currently, no permanent exhibits dealing solely with wilderness are offered in the Park's visitor center. Future facility renovations should incorporate wilderness theme exhibits.

Temporary Displays. A temporary conference type display indirectly featuring wilderness values has been produced and used in different venues. The display can be modified to emphasize a more direct wilderness message. The display could be set up at venues in the gateway communities such as Chamber of Commerce information centers, libraries, and commercial conference facilities.

Site Bulletins. A site bulletin about the wilderness values and resources of the Park should be produced for public distribution. The Park already has a large variety of site bulletins about different topics, and it may be more appropriate to infuse wilderness messages into the existing publications. Leave No Trace messages should be included in all appropriate bulletins.

Printed Informational Pieces. The Park is considering producing specialty information pieces about the Park and interpretive program offerings to be distributed to local guest facilities and restaurants. A wilderness piece should be included in these publications.

Infomercial on local Cable TV channel. The Park should work with the local cable TV station to produce a short informational piece about wilderness and Leave No Trace to be aired periodically.

Sales Items. The Rocky Mountain Nature Association will be encouraged to procure and offer sales items that promote wilderness and Leave No Trace.

Internet Web Site. The RMNP web site will include a description of the Park's wilderness resource, the significance and benefits of wilderness and how to enjoy wilderness without damaging it. The site will provide links to other important wilderness and related web sites.

2.1.4.11 Wilderness Management Coordination

Approximately 95% of RMNP (2,917 acres designated wilderness; approximately 248,464 acres recommended wilderness) is to be managed under the same Wilderness Act mandate that establishes the congressional guidance for managing Wilderness Areas.

Forty-two Wilderness Areas, totaling almost 3.3 million acres are located in the State of Colorado. Four of those are administered by the NPS totaling 60,066 acres. Within the NPS Intermountain Region there are approximately 600,000 acres of designated wilderness and approximately 5.5 million acres of proposed or recommended wilderness. Six U.S. Forest Service administered wilderness areas lie adjacent to RMNP: Indian Peaks, 73,291 acres; Rawah, 73,068 acres; Comanche Peak, 66,791 acres; Never Summers, 20,747 acres; Neota, 9,924 acres; Cache La Poudre, 9,238 acres.

The RMNP wilderness ecosystem is similar to these 6 adjacent wilderness areas as it includes glaciated peaks and valleys, alpine tundra, subalpine meadows, spruce-fir, ponderosa and lodgepole forests. A wilderness management objective for RMNP is to cooperate and coordinate the management of the Park's wilderness with management of the adjacent U.S. Forest Service wilderness areas. Where appropriate, consistent management objectives, standards, techniques, practices, guidelines and regulations will be sought, with consideration given to the differences in respective laws and policies. Information, techniques and ideas will be freely shared and discussed that will lead to better protection and management of wilderness areas administered by both agencies.

Intra-agency and interagency wilderness management communication will be fostered through individual communication and local and regional workshops. Park staff will work closely with the Interagency Arthur Carhart National Wilderness Training Center and the Aldo Leopold Wilderness Research Institute in order to stay current on wilderness issues. Coordination with other National Park Service areas, with designated and non-designated wilderness, will be actively pursued at the Washington, Regional and park levels.

Coordination will also include working with other local, state, regional and national non-government organizations, communities and agencies to preserve wilderness resources and values.

2.1.4.12 Establish Backcountry/Wilderness Steering Committee

A primary wilderness management objective for RMNP is to coordinate the various park operations and wilderness functions to manage and protect natural and cultural resources in wilderness and preserve wilderness character.

In order to accomplish this, a park Backcountry/Wilderness Steering Committee will be established. The committee will be chaired by the Park Wilderness Program Specialist and composed of a representative from each of the following work units: four Ranger Districts, one Resource Management Specialist in the Division of Resource Management and Research, one District Interpreter, Cultural Resource Specialist, Trails Foreman and others that the Superintendent may appoint. The committee will provide a forum for discussion and review of backcountry/wilderness related issues and provide recommendations to the Superintendent.

A State of the Backcountry/Wilderness Report will be compiled annually, summarizing the condition of the wilderness, the activities, actions and work taken place, their effectiveness in maintaining and restoring wilderness conditions, staffing, training and other information as determined necessary. The status of wilderness resources will be derived from the on-going monitoring of resource, visitor experience and managerial conditions. The State of the Backcountry/Wilderness Report will compare existing wilderness conditions to Backcountry/Wilderness Management Plan standards. The report will assist in establishing future annual work plans.

2.2 Alternative B – No Action Alternative/Current Management

This alternative would continue management of wilderness at RMNP under the 1984 Backcountry Management Plan and the current implementation of other unwritten guidelines and policies. There would be no comprehensive Backcountry/Wilderness Management Plan in effect, and proposed activities in wilderness would be reviewed and approved on a case-by-case basis, based on policies and guidelines that are not formalized, but generally followed. Decisions regarding use of wilderness could therefore be inconsistent and would depend on the nature of the activity and the current administration's or staff's interpretation of the policies and guidelines. In general, larger or more complex projects that require senior management approval would undergo minimum requirement/minimal tool analyses, but smaller projects may not. Certain resources would not have specific written standards or thresholds (e.g., bare ground areas in camp areas). Management Classes would not be developed, and there would be no parkwide monitoring and associated standards to determine when certain wilderness conditions would be considered unacceptable (e.g., campsite monitoring). This alternative would not provide a documented sequence of management actions or standards necessary for the most effective and consistent protection of wilderness values.

The following describes the primary differences between the No Action Alternative and the proposed plan, organized and referenced by the headings used under Section 2.1. The descriptions provide a summary of the current management status or actions in wilderness that would remain the same under Alternative B.

2.2.1 Management Classes/Desired Future Conditions

Current management does not delineate the backcountry/wilderness resource into Management Classes and standards for each. All standards or actions will be consistent throughout all areas of the backcountry/wilderness. Current management will continue to identify different backcountry/wilderness camping zones and the Research Natural Areas with specific standards. All other areas will be managed the same.

2.2.2 Resource Conditions

2.2.2.1 Vegetation/Soils

There is no monitoring system to track vegetation damage and soil erosion at day use areas and no standards for presence of bare ground use areas and maximum size. None have been developed. The appropriate number and location of day use areas may not be determined.

The use of native materials is encouraged. There are no guidelines for the procurement and use of native materials except for restoring disturbed sites as outlined in the 1994 Vegetation Restoration Management Plan. The project leader will determine the type and source of native materials to be used in a particular project (e.g., tent pad cribbing, hitchrails, sign posts)

2.2.2.2 Fish and Wildlife

There are no written guidelines for proper food storage and garbage handling procedures. The District Ranger will make management decisions on a case-by-case basis. This could create inconsistencies in education and actions taken.

2.2.2.3 Aquatic Resources

There is a non-written standard of 100 feet for the distance camp areas and privies are located from a water source. Many designated camp areas do not meet this standard; however there is no plan to relocate them. Field staff determine the location for new or relocated camp areas and privies. There will be no formal water-monitoring program for the backcountry/wilderness.

2.2.2.4 Fire

The 1992 Fire Management Plan speaks to minimum-impact suppression techniques; however, there is no requirement to analyze the use of mechanical transport and motorized equipment during wildland fire operations. Suppression forces as necessary will determine use. There is no Delegation of Authority for an outside Incident Command Team.

2.2.2.5 Cultural

The 1998 Resource Management Plan addresses the overall protection of cultural resources within the backcountry/wilderness. The National Historic Preservation Act, implementing Code of Federal Regulations, and NPS-28 provide general guidance. However, there is no written guidance specifically for general park projects that may impact cultural sites in wilderness. There is no consistent protocol for project work crews. Work crews contact the Park Archeologist as they determine necessary.

2.2.3 Visitor Experience Conditions

2.2.3.1 Solitude

The opportunity for solitude is not addressed. There are no Management Classes that identify areas where solitude is more likely experienced.

2.2.3.1.1 Group Size. Group size is addressed for backcountry overnight stays and commercial horse day trips. There is no recommended or required group size limit for day hikers.

2.2.3.2 Risk and Challenge

There is no mention of risk and challenge in current management plans. There are no Management Classes that identify the range of risk and challenge visitors may experience in the backcountry/wilderness.

2.2.3.3 Access/Visitor Activities/Special Uses

2.2.3.3.1 Day Use. New activities that may emerge are not evaluated to determine if they are appropriate for wilderness. Specific studies on day use that have been identified in the Resource Management Plan are not being planned or conducted. There is no direction for a day use monitoring system to be developed.

2.2.3.3.2 Road Closures. There is no consistent guidance on the closure of roads to various uses at different times of year. Closures may change from year to year depending on current management direction.

2.2.3.3.3 Winter Use. Routes that skiers and snowshoers use that do not follow the park trail system or roads may be cleared and enhanced to make travel easier. There is no written guidance on the marking of popular winter trails and routes. Currently, snow machines are allowed on Trail Ridge Road between Timber Creek Trailhead to Milner Pass when it is converted to winter backcountry road status. A Snowmobile Management Plan is currently being developed to address this issue.

2.2.3.3.4 Summit Registers. There is no written guidance. The general public or local clubs and organizations often place summit registers on prominent peaks and high points with park approval or knowledge.

2.2.3.4 Impacts from Civilization

Issues on the use of new technology, visual quality and natural quiet are not addressed in the current Backcountry Management Plan.

2.2.4 Administrative Conditions and Management Activities

2.2.4.1 Minimum Requirement Concept

There is no guidance on the Minimum Requirement Concept or an established Analysis Process. Park management and staff many times make decisions about appropriate actions in wilderness and/or what methods to use, without a formal written analysis to document the

decision. There is no policy on what type of tool use is appropriate in wilderness and when they may be used. The project leader usually determines which tools to use and when independently.

2.2.4.2 Aircraft Use

There is no detailed guidance on the use of aircraft, flight requests, flight scheduling, flight paths, landing sites, documentation and monitoring with regards to minimum requirement. Some projects or actions are added to approved flights, without being approved themselves, to use up contract guaranteed minimum flight time if it is available.

2.2.4.3 Backcountry Permit and Reservation System

The computerized backcountry camping permit and reservation system and Special Park Use Recovery Initiative (backcountry permit administrative fee program) were established after the 1984 Backcountry Management Plan was written and are not formally addressed. Overnight stock group size is 5 people and 5 stock for individual stock sites and 12 people and 20 stock for group stock sites. These numbers were originally put in place as an experiment years ago with no formal basis.

2.2.4.4 Camp Area and Site Management

Though the Backcountry Campsite Impact Assessment and Monitoring System has been in place since the late 1980's, there are no established standards for the overall desired condition of designated camp areas, including vegetation/ ground impact, tree/shrub damage, root exposure, social trails, access trails, illegal satellite sites barren core camp area and overall rating score.

New camp areas may be added to accommodate increased use and there are generally no restrictions on where these new camp areas may be located.

2.2.4.5 Climbing Management

There is no climbing management plan for the Park. A Climbing Task Force Report was prepared in 1990 but never implemented.

2.2.4.6 Trails Management

Trail management is addressed in detail in the 1982 Trails Plan with little mention of wilderness. Trail standards are not restricted to any particular area of the Park, ultimately allowing the upgrading or constructing of a trail, of any standard, anywhere in the backcountry/wilderness.

The Minimum Requirement Concept and minimum tool use is not discussed. Programmatic approval for certain equipment and tools is not in place. Any type of equipment or tool is used at the discretion of the project leader with no formal minimum requirement analysis. Many times convenience and economic efficiency are used to determine the appropriate tool.

2.2.4.7 Facilities Management

2.2.4.7.1 Patrol Cabins and Tent Platform Camps. There is no written guidance on the construction of new or rebuilding of patrol cabins and tent platform camps if destroyed as a result of natural disaster.

2.2.4.7.2 Fire Lookouts. There is no written guidance on the construction of new or rebuilding of fire lookouts if destroyed as a result of natural disaster.

2.2.4.7.3 Corrals and Hitchrails. There is no written guidance on the standards for, construction or use of corrals.

2.2.4.7.4 Human Waste Management Systems. The pit privy is generally the standard toilet used in the backcountry/ wilderness. There are no standards for the type of systems to be considered. Location and installation of privies is at the discretion of the District Ranger. When a privy is full a new one is generally dug nearby. Current privies and potential sites are not being evaluated for potential risks to water quality.

2.2.4.7.5 Food Protection Devices. There is no standard or approval process for food storage devices. The type and placement is at the discretion of the District Ranger.

2.2.4.7.6 Can Camps and Caches. Can camps may be placed in the backcountry/wilderness anytime, anywhere at the discretion of a Division Chief, District Ranger or Work Crew Leader.

2.2.4.7.7 Work Crew Camps. There are no standards for using, locating, or determining which activities are allowed at work crew camps. Work crew camps are determined necessary and located by project leaders. Campfires are allowed.

2.2.4.7.8 Signs. Interpretative signs currently in place in the backcountry/wilderness will remain in place.

2.2.4.7.9 Fencing/Retaining Walls. There are no standards for fencing or retaining wall construction in the backcountry/wilderness. Minor fencing is constructed when determined necessary by the District or Area Ranger or project leader. There is no formal review or approval process that is followed.

2.2.4.8 Research and Resource Monitoring

There is no checklist of wilderness issues and sideboards for researchers to follow in preparing research proposals. Many researchers do not even realize 95% of RMNP is in some form of wilderness classification and what that means. There is no requirement for addressing the Minimum Requirement Concept and no guidance on the placement of research equipment or the review of equipment currently in place to determine if it is still necessary.

2.2.4.9 Interpretation and Education

Park specific wilderness themes have not been identified. The variety of audiences and how to reach them with the wilderness message have not been identified. A full range of services and products specific to wilderness has not been established.

2.2.4.10 Establish Backcountry/Wilderness Steering Committee

There is no Backcountry/Wilderness Steering Committee to discuss and address wilderness issues as they arise. Issues are discussed informally which leads to inconsistency. There is no formal document that compiles and summarizes backcountry/wilderness issues, activities and actions for a given year.

Table 2-1
Comparison of Standards between Alternatives

Indicator	Standard				Alternative B
	Alternative A				
	Management Class 1	Management Class 2	Management Class 3	Management Class 4	
Day Use Sites, Bare Ground					
Presence of bare ground use areas	None	Designated areas at destination sites			Anywhere created
Maximum size	No bare ground	50 sq. ft.	100 sq. ft.	150 sq. ft.	No standard
Group Size Limits (* recommended maximum)					
Maximum overnight group size	No camping allowed	7 Crosscountry areas, 4 Bivouac areas	7 Individual sites, 12 Group sites	No camping allowed	Same as Alternative A
Maximum overnight stock group size	No camping allowed	No stock camping allowed	6 people/8 stock individual sites, 12 people/16 stock group sites	No stock camping allowed	5 people/5 stock individual sites, 12 people/20 stock individual sites
Maximum day stock group size	Stock no allowed	Stock no allowed	20	20	20
Maximum day use group size	7*	7*	20*	None	No standard
Campsite Size and Tent Pads					
Maximum campsite size	No camping allowed	0 sq. ft.	Individual site 800 sq. ft.	No camping allowed	No standard
			Group site 1200 sq. ft.		
			Stock site 2000 sq. ft.		
Tent pad	Not applicable	None	Individual sites up to 3	Not applicable	No standard
			Group sites up to 6		
Tent pad size	Not applicable	Not applicable	100 sq. ft.	Not applicable	No standard
Designated Campsites (** Backcountry Campsite Impact Assessment and Monitoring System)					
Camping	No camping allowed	Crosscountry and Bivouac Areas	Designated Sites	No camping allowed	Same as Alternative A
Distance from water source	No camping allowed	200 feet	200 feet	No camping allowed	100 feet
Vegetation/ Ground	Not applicable	No impact	Bare Ground	Not applicable	No standard
Tree/Shrub Damage	Not applicable	No impact	1 - 20% damaged	Not applicable	No standard
Root Exposure	Not applicable	None	1 - 20% of trees/shrubs with exposed roots	Not applicable	No standard
Social Trail(s)	Not applicable	0	No more than 1 discernable	Not applicable	No standard
Access Trail(s) Tread	Not applicable	No access trails	3 - 6" deep and/or 18 - 24" wide	Not applicable	No standard
Illegal Satellite Site(s)	Not applicable	0	1	Not applicable	No standard
Cleanliness	Not applicable	No impact	1 fire scar some ashes scattered 1 - 2 feces/tp visible	Not applicable	No standard
Barren Core Camp Area (sq ft)	Not applicable	0 sq. ft.	400' - 800'	Not applicable	No standard
			800' - 1,200'		
BCIAMS** Impact Rating Score	Not applicable	1	<12	Not applicable	No standard